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The market for cinnamon and cassia and their essential oils

CFTRI, Experiment Station
Gole Bungalow, Chhindwara Road
Nagpur-I.
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Tropical Products Institute Report

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The market for cinnamon and cassia and their essential oils

C. E. F. Manning

uary 1970 **Tropical Products Institute,** 56/62 Gray's Inn Road, London, W C 1.

Ministry of Overseas Development

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Requests for further information should be addressed to:

The Director,
Tropical Products Institute,
56/62, Gray's Inn Road,
London, W.C.1.

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Summary

Cinnamon and cassia are the spices obtained from the dried bark of species of *Cinnamomum* which grow wild or are cultivated in many parts of the Far East and the Indian Ocean Area.

The main sources of true cinnamon are Ceylon and the Seychelles.

Cinnamon and cassia have similar uses as spices in baking and pickling. They also have a limited use in some pharmaceutical products.

Ceylon cinnamon

Ceylon cinnamon is the dried inner bark of shoots of *Cinnamomum zeylanicum* Nees. The finest quality is exported in the form of long tubes of bark known as quills. Pieces of broken quill are known as quillings and further grades are known as featherings and chips. The top grade of Ceylon cinnamon is described as Fines 00000 going down to Fines 0 and then to Hamburg H.i, ii and iii, followed by Quillings, Featherings and Grade I and Grade II chips.

Seychelles cinnamon

C. zeylanicum was introduced into the Seychelles from Ceylon and, by 1965, the area under cinnamon was estimated at 20,000 to 25,000 acres.

Three main types of bark are produced in the Seychelles:

(a) Compound quills, simple quills and quillings.

(b) Thin scraped bark.

(c) Rough unscraped bark.

Of these (b) and (c) are the most important because they are the types used almost exclusively in the markets of the UK and the USA.

The quantity of Seychelles cinnamon bark for export is controlled by the Government and marketing is carried out mainly by merchants (although some producers export direct) who have long-standing connections in the importing countries.

Chinese cassia

Chinese cassia or Cassia lignea is obtained from *C cassia* Blume, a tree which is cultivated widely in south-eastern China. The twigs of the trees are stripped of offshoots and leaves and the bark is removed. The bitter-tasting epidermis is removed and the bark dried and rolled to form a hollow tube or quill. The quills

are separated into three grades:

1. Whole quills – known as 'Chinese rolls' or 'canton rolls'.

2. Selected broken

3. Extra selected broken – consisting of a thinner bark than 2.

Cassia is regarded in the United Kingdom as an inferior substitute for cinnamon and, at the usual ruling prices, is considered to be too costly to be used to any extent.

Indonesian cassia

This type of cassia comes from *C. burmanni* Blume. It occurs wild in many parts of south-east Asia and is cultivated mainly in Sumatra, in the uplands of Padang. Strips of bark are sun-dried and form quills which are graded according to their length, colour and quality into three grades, A, B and C.

Saigon cassia

Saigon cassia is obtained principally from *C. loureirii* Nees which grows wild and is cultivated in Vietnam. The bark is marketed as squared pieces which are unscraped and unrolled and quills which, of course, are rolled and often scraped. Quills are graded as thin, medium and thick, broken pieces are baled and sold as broken cassia No.1 and No.2.

International Trade

Exports of cinnamon

The principal exporters are Ceylon and the Seychelles. Ceylon's exports have been fairly steady for several years at about 2,500 tons a year, the main markets being Mexico and the USA. Whereas Ceylon exports chiefly quills, the Seychelles exports mainly bark, sales of which are in the order of 1,000 to 1,500 tons a year, largely to the UK and the USA.

Other exporters are the Malagasy Republic which sells mainly to France and the USA, Malaysia and Singapore and Hongkong.

Imports of cinnamon

In the trade statistics of many countries it is impossible to differentiate absolutely between imports of cinnamon and imports of cassia. It is, however, possible to gain some idea by considering the countries of origin.

The principal importers of cinnamon are the USA and Mexico. The USA purchases have exceeded 1,000 tons since 1965 and in 1967 reached nearly 2,000 tons. Mexican imports are on a smaller scale to the order of 800 to 1,000 tons a year.

The United Kingdom imports are listed as Cinnamon or Cassia and supplies come mainly from the Seychelles. Some other importers are the EEC countries, Sweden, Denmark, France and Iran.

Exports of cassia

Statistics of the main exporting countries of cassia are scanty. Indonesia was the

principal producing area and export figures are not available after 1962. Statistics from Mainland China are not available but Hong Kong figures are and it is thought likely that a large part of China's exports will be handled through Hong Kong merchants.

The largest market for Indonesian cassia was the USA which in the period 1960-62 took about 31 per cent of exports and Belgium and Luxemburg which absorbed some 29 per cent. Import returns show that in 1966 Indonesian exports to the USA were 4,489 tons and to Belgium/Luxemburg about 200 tons.

Hong Kong exports have been disposed of mainly to Malaysia and Singapore and to Pakistan and total exports vary between 1,400 and 2,300 tons. Other smaller exporters are Malaysia and Singapore, Vietnam and Taiwan.

Imports of cassia

The largest importer of cassia is the USA which purchased nearly 4,000 tons of the spice in 1967, mainly from Indonesia. Belgium and Luxemburg in 1966 took in the region of 1,000 tons of cassia and cinnamon of which about one-half came from China. Other importers are India, Japan, Taiwan and Iran.

Prices

The prices of cinnamon are always higher than those of cassia. Over the period 1957 to 1968 the prices of cinnamon quillings were steadier than those of quills and the quarterly average prices of quillings fluctuated about a mean of approximately 550/- per cwt. The price of quills, grade 000, in the second quarter of 1968, was 2,916/- per cwt.

Prices of cassia also fluctuated, rising from 120/- per cwt. in 1957 to 410/- per cwt. in 1968.

Future Prospects

Trade enquiries made in the UK indicate little change in the pattern of consumption of cinnamon in the past six or seven years. The main market is still the United States, but no significant increases in either the US demand or in UK demand are expected.

It is possible that the market for cinnamon would be able to absorb a small increase in production carried out over some years, but a comparatively small increase in supply can cause a disproportionate fall in price. At present prices no future is seen in the UK for cassia.

Cinnamon Oils

Cinnamon bark oil

Cinnamon bark oil is obtained by steam distillation of the bark of *C. zeylanicum* and is regarded by the trade as the best type of cinnamon oil. It is used extensively in flavouring and, to a lesser extent, in perfumery. The centre of production and the main exporter is Ceylon and there is some local distillation in the Seychelles and India. The best oil, however, is produced in the USA and the

European countries from imported raw material.

Trade statistics are few but disclose that the principal importers are the USA, France and Italy. Prices in the last decade have fluctuated widely and stood at Sh. 440/- per lb. in January 1969.

The demand for the oil in the UK has changed little over the past few years and the trade, though small, is steady and is not expected to change in the near future.

Cinnamon leaf oil

Cinnamon leaf oil is obtained by steam distillation of the fresh leaves of *C. zeylanicum.* The chemical composition of this oil is different from that of the bark oil and although the main sources of supply are, as is to be expected, Ceylon and the Seychelles, it is as a source of eugenol that the oil is basically in demand and the Seychelles oil contains more of this substance. Otherwise, the leaf oil is used as a flavouring and in perfumery.

There are few trade statistics available but prices have shown an overall tendency to rise over the past few years. This is probably more the result of a shortfall in supply rather than because of any increase in demand. Nevertheless, no real encouragement can be drawn from this situation since, if the prices rise to too high a point, manufacturers of eugenol will merely switch to a cheaper raw material and users of the leaf oil in other capacities will cease to use it.

Cassia Oils

Cassia bark oil

Cassia leaf oil

Unlike the cinnamon oils, cassia bark oil and cassia leaf oil have the same chemical composition and both are obtained by steam distillation. Because of its tendency to discolour soaps and perfumes it is seldom used in this trade but it is utilized in the cheaper types of spice essences.

A small amount of cassia oil is distilled in the United Kingdom from imported raw material. This is used locally and is also exported. Other trade statistics are few. Hong Kong recorded exports of 10,200 lb. in 1967, probably of oil obtained from Mainland China and merchanted through Hong Kong brokers. Principal importers were Canada, Japan, Malaysia/Singapore.

Quoted prices show wide variations although it seems doubtful that contracts would be made at some of the higher prices. In October 1968, cassia oil was quoted at 19.5 shillings per lb. The flavour of cassia oil derives mainly from its high content of cinnamic aldehyde. This can be produced synthetically and was being quoted at 8.5 to 9.5 shillings per lb. round about the same time as the above quotation for cassia oil.

There appears to be little likelihood of expanding the demand for the oil and such demand as there is can probably be satisfied by existing producers or by substituting low-priced synthetics for the natural oil.

The market for cinnamon and cassia and their essential oils

INTRODUCTION

Cinnamon is a spice obtained from the dried inner bark of species of *Cinnamomum*. The cinnamon tree is a native of Ceylon, East India and Indonesia. It grows wild and is also cultivated in Ceylon, The Seychelles, Indonesia, the Malagasy Republic, the Philippines, India, Burma, Korea, Taiwan, Japan, Vietnam and mainland China.

The main sources of true cinnamon are Ceylon and the Seychelles, the species grown being *Cinnamomum zeylanicum*.

Cassia has a very similar flavour to true cinnamon for which it is regarded as a cheap substitute. Cassia is derived from the bark of other *Cinnamomum* species and is grown in the Far East, particularly in China and Indonesia.

The trade recognizes three distinct types of cinnamon:

(a) Ceylon cinnamon – the dried inner bark of shoots of *C. zeylanicum* Nees.

(b) Saigon cinnamon – this type is obtained from Vietnam and Hong Kong and is the dried bark of *C. loureirii* Nees. The bark of Saigon cinnamon is used solely as a spice and not at all for distillation of oil.

(c) Cassia or Chinese cinnamon – the dried bark of several species, particularly *C. cassia* Nees ex Blume.

Each of these three types is considered in a separate section below.

Volatile oils can be obtained from the bark and leaves of both true cinnamon and cassia and these are considered below.

Cinnamon and cassia have similar uses. Cinnamon is an important baking spice and is used in pickling spices and curry powder. It also has a limited use in dentifrices and similar pharmaceutical products.

CEYLON CINNAMON

C. zeylanicum originally grew wild in Ceylon but is now a cultivated plantation crop. Five species of *Cinnamomum* are recognized in Ceylon, four of which are believed to be indigenous.

The plantations are mainly in the districts of Galle and Matara in the Southern Province and around Negombo in the Western Province. The finest quality

cinnamon is that from the Negombo region and half the cultivated area in Ceylon is in this region.

The cinnamon tree grows to a height of 30-50 feet in the wild state, but on plantations it is cut back to produce a coppiced bush with slender stems, not more than 8 feet high. Shoots are harvested during and after the heavy rains in May and November, although there is some cutting throughout the year. The main crop reaches the market in July/August, followed by a smaller crop in December/January.

After the rains the 'flush' occurs, the period when the young red leaves appear. As these leaves turn green the sap flows freely and at this stage the bark can be separated easily. The stems are cut close to the ground when they are about 2 years old, as straight as possible, 3-5 feet in height and ½-¾ inches in diameter. The quality of the cinnamon obtained improves on successive croppings. The pruned leaves are used for green fertilizing or for distillation of leaf oil, depending on the prevailing price of leaf oil.

The bark is peeled off using special knives. Bark which will not separate readily is rubbed with a piece of hard wood. The slips thus obtained are wrapped in coir matting and left overnight. It is possible that slight fermentation takes place at this stage which facilitates scraping off the epidermis. The scraped bark obtained forms quills more readily than does unscraped bark.

The finest quality Ceylon cinnamon is exported in the form of long tubes of bark known as quills. A quill is made by rolling strips of scraped inner bark about 6-8 inches long into tubes. The tubes are packed with small pieces of inner bark. Several of the short tubes are then joined to form a tube approximately 3 feet long. The rolled quills are then dried for three days in the sun and three days in the shade. During this process the colour of the quills darkens. The quills are then graded and packed in 100 lb. bales for export.

Pieces of broken quill are sold as quillings and are also exported in 100 lb. bales.

Further grades known as featherings and chips are also exported. Featherings are usually obtained from high quality cinnamon and are shavings from shoots which are unsuitable for peeling. They are exported in 100 lb. bales. Chips are small pieces of bark obtained from a coarser type of cinnamon plant in which the inner and outer bark cannot easily be separated. Chips are exported in pressed bales of 2-3 cwt.

Grades

(a) Quills – Ceylon cinnamon quills are graded according to colour, size and thickness of bark. The following grades are recognized, 00000 being the finest grade. Alongside are quoted market prices c.i.f. UK port in April 1969:

Fines	00000	–
	0000	8/6d. per lb.
	000	8/3d. per lb.
	00	–
	0	–
Hamburg	H i	6/9d. per lb.
	H ii	6/7½d. per lb.
	H iii	–

(b) Quillings – these are marketed as medium quality cinnamon. Price 4/8½d. per lb.

(c) Featherings – marketed as medium quality cinnamon. Price 3/3d. per lb.

(d) Chips – Grade I; actually small featherings obtained by scraping very small twigs. They contain a small amount of outer bark.

Grade II; these contain inner and outer bark and inert wood and are obtained by beating small twigs with a heavy piece of wood.

The following qualities of Ceylon cinnamon chips are also recognized:

Type 1	Free of sand, dust and refuse.
Type 3	Very little dust.
Type 0	As 1 but washed and therefore cleaner.
Type 00	As 0 but bleached.

SEYCHELLES CINNAMON

C. zeylanicum was introduced into the Seychelles from Ceylon and first cultivated in the late 18th century. Cinnamon trees now grow semi-wild on four islands of the group and are abundant on Mahe and Silhouette.

After World War II propagation was helped by the planting of cinnamon stems as supports for the vanilla vines. Propagation is now effected by several species of birds, particularly the Indian Mynah, *Acridotheres tristis.*

In 1965 the area under cinnamon was estimated to be between 20,000 and 25,000 acres.

On large estates of 100 or more acres cinnamon bark and leaves are collected throughout the year, except during the 'flushing' period in October to December, when the leaves are unsuitable for distillation. On smaller estates and in easily accessible areas collection takes place every 18-20 months. Bushes are cut to within 8-10 inches of the ground. Stems are sorted according to diameter and bark thickness and stripped at site.

Three main types of bark are produced in the Seychelles:

(a) Compound quills, simple quills and quillings.

(b) Thin scraped bark.

(c) Rough unscraped bark.

Of these (b) and (c) are the most important.

(a) Quills are about 12 inches long and consist of scraped bark which has been tightly rolled. Compound quills are made by placing several simple quills inside each other and then rolling them together. There is little production of these at present. Quillings are broken quills and quill trimmings.

After rolling, quills are dried either by artificial heat or by a 'sun and shade' process. The artificial method is widely used for simple quills and takes about 20 hours. In the natural method the quills are dried in the sun for 24 hours and then taken inside to dry slowly on concrete floors for a further 4-5 days.

The dried quills are sorted according to colour and size. Compound quills are then tied in bundles of ½-1 lb. and placed in wooden boxes. Simple quills are packed end on in wooden boxes weighing 200-300 lb.

(b) Thin scraped bark is in the form of long narrow strips obtained by scraping shoots which are too small for making quillings, or from large shoots with thin bark. The bark is dried on concrete floors in the shade.

(c) Rough unscraped bark consists of pieces of bark from old shoots and stocks and is obtained by beating the shoot or stock with a piece of wood. After drying the pieces are exported in sacks.

Scraped bark is favoured by users in Europe but unscraped bark is used almost exclusively in the UK and the USA because of its lower price which, in April 1969, was quoted at 485/- per cwt. c.i.f. that is about 4/4d. per lb.

The quality of Seychelles cinnamon bark for export is controlled by the Government. Export permits must be obtained by exporters and are only granted for clean, dry bark containing not more than 1.5 per cent foreign matter and 15 per cent moisture. The product is exported in jute bags.

CASSIA

Cassia is a spice obtained commercially from the dried inner bark of three species of *Cinnamomum*, described below under their colloquial names.

The major producing countries are Indonesia, mainland China and South Vietnam. No production figures are available but estimates based on trade returns show Indonesian output to be around 5,000 tons per annum. Before the present state of emergency South Vietnam's production of cassia was around 350 tons per annum.

Chinese cassia

Chinese cassia or cassia lignea is obtained from *C. cassia* Blume, a tree which is cultivated in the provinces of Kwangsi, Kweichow and Kwangtung in south-eastern China. Wild trees attain a height of 30-60 feet but most of the trees exploited for bark and oil production are coppiced plantation trees, 5-9 feet high. According to Guenther[2] the main harvest is in June/July with a smaller one in January/February. Twigs which have attained a thickness of about 4 cm. are cut and stripped of offshoots and leaves. The bark is then removed, the bitter-tasting epidermis is scraped or planed off, and the bark is dried in the sun when it rolls up to form a hollow tube or quill. The quills are then packed into bundles about 18 inches in diameter. The quills are separated into three grades:

1. Whole quills – known as 'Chinese rolls' or 'Canton rolls'.

2. 'Selected broken'.

3. 'Extra selected broken' – consisting of thinner bark than (2).

The twigs and leaves which were stripped from the main stem are distilled to give cassia oil (q.v.).

A few trees are left uncut on most plantations to provide cassia 'buds' and seed for propagation. Cassia 'buds' are not true buds but immature fruits. Dried 'buds'

are used both domestically and are exported. In China they are regarded as possessing a high medicinal value.

Cassia is used for similar purposes to cinnamon, for which it is regarded as an inferior substitute. The main importers of Chinese cassia are believed to be Japan and the member countries of the European Economic Community. Trade enquiries made in the UK indicate that Chinese cassia is considered too costly to be used to any great extent. The US ban on imports from mainland China precludes its use of Chinese cassia exported direct from China.

Indonesian or Batavia cassia

Batavia cassia, also known as 'cassia vera' (on the London market) and 'Padang cinnamon' comes from *C. burmanni* Blume. This species of *Cinnamomum* occurs wild throughout the Malay Archipelago. The main centre of cultivation is the West Coast of Sumatra, especially in the uplands of Padang, where the tree is cultivated on smallholdings and on plantations.

The best quality bark comes from the trunk and the bigger the trunk is, the thicker and more valuable the bark. Thick branches yield a bark of lower quality.

The strips of bark are sun-dried, forming quills. The quills are graded by exporters according to their length, colour and quality into three grades, A, B and C. Bundles of quills are sewn into jute sacks which vary in weight between 66 lb. and 130 lb.

Saigon cassia

Saigon cassia, also known as Saigon cinnamon, is obtained principally from *C. loureirii* Nees, a species of *Cinnamomum* which grows wild and is also cultivated in Vietnam. The bark is marketed in two forms – squared pieces, unscraped and unrolled, and quills, which are often scraped.

Quills intended for Western markets are packed in bales of 133½ lb. and 66 2/3 lb. and are graded as thin, medium and thick. Broken pieces are baled and sold as broken cassia No.1 and No.2.

INTERNATIONAL TRADE

Tables 7 to 39 in the Statistical Appendix give available statistics of exports and imports of cinnamon and cassia. The quantity of cinnamon quills entering world trade from the major exporting countries reached over 2,930 tons in 1969 compared with 2,730 tons in the previous year and an annual average for the years 1963 to 1966 of 2,760 tons. Complete figures for 1967 are not yet available but the main exporter, Ceylon, has improved her performance by selling about 2,640 tons compared with 2,350 tons in 1966. Bark exports (all from the Seychelles) fell in 1966 to 1,504 tons compared with 1,849 tons the previous year.

The discussions on the various markets that follow are based on the available export statistics.

Exports of cinnamon

Ceylon

Total exports of cinnamon quills (Table 7) were reasonably steady about an average of 2,426 tons per annum over the period 1957-67, rising to a period maximum of 2,639 tons in 1967. Exports to the USA averaged 366 tons per annum in the period 1957-62 but rose to 666 tons per annum in the period 1963-67. Table 1 shows the distribution of exports for several selected years.

Table 1
Cinnamon quills – exports from Ceylon
(Percentage by destination)

To:	1957-9	1963	1967
German Federal Republic	4	5	5
Mexico	45	34	46
Peru	8	10	7
USA	15	28	24
Other countries	28	23	18

Source: Derived from Ceylon Customs Returns

Total exports of cinnamon chips (Table 8) rose from an average of 252 tons per annum for the period 1957-59 to 332 tons for the period 1960-62. Exports were unusually high in 1963 at 430 tons. Nevertheless the annual average for the next four years, 1964-67, was 358 tons. Thus there does appear to be on balance a rising trend in Ceylon's exports of chips. The main importers were Australia, which took 35 per cent of total chip exports in 1967, the United Kingdom, South Africa and Argentine.

Seychelles

Total exports of cinnamon bark (Table 9) increased from an average of 888 tons per annum in the period 1957-59 to 1,849 tons in 1965 but fell to 1,504 tons in 1966. The 1965 total was caused by an increase in exports to the Netherlands and the United Kingdom and a large increase in exports to the United States. The sudden increase is believed to have been caused by the shortage of Penang cassia which increased consumption of cinnamon bark. Annual exports for the years 1963, 1964 and 1966 (omitting 1965 as being atypical) average 1,217 tons. This figure may be compared with the annual average for the period 1957 to 1962 of 966 tons. Table 2 shows the distribution of exports in selected recent years.

Table 2
Cinnamon bark – exports from the Seychelles
(Percentage by destination)

To:	1957-9	1963	1965
France	5	8	5
German Federal Republic	16	12	8
Netherlands	7	9	6
UK	53	40	29
USA	11	15	39
Other countries	8	16	13

Source: Derived from Seychelles Trade Report

The Seychelles export small quantities of cinnamon quills (Table 10), mainly to the United Kingdom. Over the period 1957-66 total exports averaged 7.0 tons per annum of which an average of 6 tons annually was sold to the United Kingdom.

The Malagasy Republic

Exports (Table 11) are listed as exports of 'Cinnamon and flower' and these increased rapidly from an average of 8 tons per annum in the period 1957-59 to an average of 184 tons for the period 1963-65, then increased to 557 tons in 1966. In the period 1957-63 almost all exports went to France. France is still a major importer but in 1965 the USA entered the market with a purchase of 25 tons and overtook France as the principal importer in the following year,with purchases amounting to 212 tons compared with 170 tons going to France. Since 1964 increasing quantities have also been exported to other West European countries and to Algeria.

Malaysia and Singapore

Total exports of cinnamon (Table 12) fell from 757 tons in 1962 to 114 tons in 1963 and to 24 tons in 1964, recovering to 67 tons in 1965. The main importer is the United States. Substantial quantities were exported to France and the German Federal Republic in 1962,but in 1965, the US apart, the importing countries were mainly in the Far East.

Hong Kong

Hong Kong exports small quantities of cinnamon (Table 13), mainly to Singapore and China. Exports were 3.4 tons in 1959 and, as the result of purchases by Singapore in 1964 of 10 tons, were 10.2 tons in that year. Purchases by Singapore were steady at around the same figure in the next two years and, in 1965, China gave a boost to exports by taking 5.2 tons. In 1966 total exports of 9.8 tons went to Singapore but in the following year 21 tons were exported, about a half of the total to China and Singapore combined and the other half to other countries.

Imports of cinnamon and cassia

Some confusion exists in the nomenclature of import statistics. Some countries do not distinguish between cinnamon and cassia, some list the two separately and some class as cinnamon the imports of both. It is usually possible to deduce which product is referred to in each case by considering the country of origin. It

is not possible, however, to give an accurate figure for imports of, say, true cinnamon in every case because of the considerable quantities often recorded under 'Other Countries'.

In each of the following analyses, which are listed in decreasing order of importance, the nomenclature used by the importing country is given.

United States

United States imports of 'Cinnamon and chips, unground' (Table 14) increased from an average of 366.2 tons per annum in the period 1960-62 to an average of 610 tons in the following two years. In 1965 and 1966 imports rose sharply to over 1,000 tons each year and reached 1,943.4 tons in 1967. The major supplier was the Seychelles, followed by Ceylon and, in 1967, the Malagasy Republic. Some quantities have also been imported from East Africa.

Mexico

Imports of 'Cinnamon of all kinds, not pulverised' (Table 15) rose from an average of 955 tons per annum in the period 1957-59 to 1,211 tons in 1963. Imports then fell to 797 tons in 1965 but recovered to 1,041 tons in 1966. Imports came mainly from Ceylon (from wheresnearly 85 per cent of total cinnamon imports were bought in 1966) and, to a lesser extent, from the US. Imports can be assumed, therefore, to be mainly true cinnamon.

Small quantities of 'Pulverised cinnamon' are imported, mainly from the US. The amount fell from an average of 32 tons per annum in the period 1960-62 to a negligible amount in 1966.

German Federal Republic

Total imports of 'Cassia and Cinnamon' (Table 17) averaged 651 tons per annum for the period 1957-59, 730 tons for the period 1960-62, and 774 tons for the period 1963-66.

Over the period 1957-66 an average of 106 tons per annum were imported from Ceylon. Between 1957 and 1964 approximately 98 tons per annum were imported from Zanzibar, since when there has been no importation. In more recent years, 1964 to 1966, substantial quantities were imported from the Malagasy Republic and Mauritius. These imports would probably be pure cinnamon.

The main suppliers of cassia over the period were China and Indonesia. Imports from China fell from an average 167 tons per annum in the period 1957-59 to 5 tons per annum in the period 1960-63, and then rose rapidly to 462 tons in 1966. Imports from Indonesia fell from an average 457 tons per annum in the period 1960-62 to 4 tons only in 1966.

United Kingdom

United Kingdom imports (Table 18) are listed as 'Cinnamon or cassia' but the sources of the imports show that the UK is primarily an importer of cinnamon. Total imports fell from an average of 653 tons per annum in the period 1957-59 to 546 tons per annum in the period 1960-67. The major supplier was the Seychelles; imports from there averaged 448 tons per annum over the period 1957-67. Imports from Ceylon fell from an average 42 tons per annum in the period 1957-63 to 32 tons in 1964 and then rose to a provisional figure of 75 tons in 1967.

Imports from China averaged 42 tons per annum in the period 1957-59 and 27 tons per annum in the period 1960-62 but then fell to a negligible level until 1967 when 2 tons were imported. Similarly, imports from Hong Kong fell from 22 tons per annum in the period 1957-59 to a negligible quantity and then rose to 9 tons in 1967.

Netherlands

Total imports of 'Cinnamon and cinnamon-tree flowers' (Table 19) rose from 373 tons per annum in the period 1957-59 to 450 tons per annum in the period 1960-62. (2 year average, 1961 figures not available).

The main sources over the period were Indonesia and China. The greater part of Dutch imports were, therefore, of cassia. Imports from Indonesia averaged 297 tons per annum over the period 1957-65 but fell to 43 tons in 1966. Imports from China averaged 124 tons per annum in the period 1965-67.

Imports of true cinnamon from Ceylon varied about an average of 15 tons per annum over the period 1957-67. Imports from Mauritius and the Seychelles increased rapidly in recent years from 12 tons in 1965 to 82 tons in 1967.

Sweden

Annual average imports for the periods 1957-59, 1960-62 and 1963-67 were respectively 329, 280 and 273 tons (Table 20) indicating that demand has been stagnant, or possibly declining slightly. Small quantities were imported from Belgium and Luxembourg in 1966 and 1967 but the main suppliers, in decreasing order of importance, are China, Indonesia and India.

Indonesia used to be the major source but imports fell from 261 tons in 1964 to 60 tons in 1967. Imports from China increased from nil in 1963 to 177 tons in 1966, but fell to 105 tons in 1967.

Italy

Total imports of 'Cinnamon, whole' (Table 21) rose from 117 tons per annum in the period 1957-59 to 216 tons in 1963. Over the period 1963-67 imports average 193 tons per annum.

The main supplier was Ceylon, imports averaging 109 tons per annum over the period 1963-67.

Small quantities of cassia were imported from China and Indonesia throughout the period 1957 to 1966 when imports from China averaged 28 tons per annum and imports from Indonesia averaged 22 tons annually, although the actual figures have dropped markedly from 34 tons in 1964 to 17 tons in 1965 and to 7 tons in 1966.

Iran

Total imports of 'Cinnamon, unground' (Table 22) showed considerable annual variation during the period 1963-66 but the annual average for the period of 205 tons indicates relatively little change in demand when compared with the annual average of 189 tons for the period 1960-62. Imports consisted almost entirely of cassia, the main supplier, prior to 1965, being China. Substantial quantities were also imported from Hong Kong. In 1966 Dubai became the main source of supply, presumably re-exporting cassia or cinnamon imported from other countries. Kuwait and Oman also appear as suppliers to Iran and there is no record of any of these Gulf states being growers.

Peru

Over the period 1957-66 Peru imported an average of 200 tons per annum of 'Cinnamon, whole and ground' (Table 23). Most of this total was, in fact, whole cinnamon. Ceylon supplied almost the whole of Peru's imports of cinnamon. Small quantities were imported from the UK and the US, presumably of good cinnamon.

Denmark

Total imports of 'Cinnamon and cinnamon-tree flowers' (Table 24) averaged 155 tons per annum over the period 1957-66. Most of this total was cassia, mainly from China and Indonesia. Imports from China rose from 6 tons per annum in the period 1957-59 to 104 tons in 1966. Total imports from China and Indonesia averaged 92 tons per annum over the period 1957-66. In 1966, China accounted for some 73 per cent of Danish Imports, Indonesia almost 15 per cent whereas true cinnamon from Ceylon represented, at 4 tons, only 3 per cent.

France

Total imports of 'Cinnamon, including some cassia' (Table 25) were fairly steady over the period 1957-67 about an average of 111 tons per annum.

The main suppliers of cinnamon were Ceylon and the Malagasy Republic while the main suppliers of cassia were China and Indonesia.

Switzerland

Total imports of 'Cinnamon and cinnamon-tree flowers' (Table 26) were fairly steady about an average of 108 tons per annum throughout the period 1960-67. Just over 50 per cent of this total came from Ceylon. In recent years true cinnamon was also imported from the Malagasy Republic and Mauritius. A certain amount of cassia was imported from China and Indonesia. In 1967, this amounted to some 17 per cent of total imports of 107 tons, the greater part being supplied by China.

Other countries

Tables 27 to 29 list imports of 'Cinnamon' into India, Taiwan and Guyana.

Indian imports averaged 10 tons per annum over the period 1957-67 and came mainly from Ceylon, Malaysia and Singapore.

Imports into Taiwan averaged 4 tons per annum over the period 1963-66 and came mainly from Hong Kong.

Imports into Guyana averaged 3.9 tons per annum over the period 1957-62 and fell to 3.1 tons in 1964. Imports came mainly from Grenada.

Exports of cassia

Statistics of exports from mainland China are not available. Exports from Indonesia, the major producer, are only available up to 1962. It is understood that considerable quantities of cassia are consumed in the producing countries, both as a spice and for medicinal purposes.

It should be noted that although cassia tends to be regarded as a substitute for cinnamon it is traded in far greater quantities.

Indonesia

Total exports of 'Cassia vera and other cinnamon cassia' (Table 30) increased from an average of 6,347 tons per annum in the period 1957-59 to 8,930 tons per annum in the period 1960-62. Table 3 shows the distribution of exports in these two periods as derived from the Indonesian figures. It is pointed out that as far as Belgium/Luxembourg are concerned the proportions are far higher than would be obtained by considering the import figures in Table 36.

Table 3
Cassia - exports from Indonesia
(Percentage by destination)

To:	1957-59	1960-62
Belgium, Luxembourg	28	29
Netherlands	27	–
Malaysia	1	10
Singapore	24	7
USA	10	31
Other countries	10	23

Source: Derived from *Trade by Commodity*

The rise in exports to the USA from 665 tons per annum in the period 1957-59 to 2,784 tons per annum in the period 1960-62 was caused by the imposition of a US embargo on trade with China. Import returns show that Indonesian exports to the US rose to 6,669 tons in 1965 but fell to 3,529 tons in 1967.

Hong Kong

Total exports of cassia (Table 31) fell from an average of 2,714 tons per annum in the period 1957-59 to 1,735 tons in 1963, recovered to 2,275 tons in 1964 and then fell to 1,448 tons in 1967. Table 4 shows the distribution of exports.

Table 4
Cassia - exports from Hong Kong
(Percentage by destination)

To:	1957-9	1963	1967
India	27	3	–
Japan	10	2	4
Malaysia and Singapore	4	9	28
Pakistan	9	47	22
Other countries	50	39	46

Source: Derived from *Hong Kong Trade Statistics*

It can probably be assumed that most of these exports are of Chinese mainland origin.

Malaysia and Singapore

Total exports of cassia (Table 32) fell from an average of 1,692 tons per annum in the period 1957-59 to 996 tons in 1965, attaining a period maximum of 2,301 tons in 1963 and a minimum of 643 tons in 1964. The most marked decreases were in exports to the US and to the German Federal Republic. Exports to the US fell from an average of 568 tons per annum in the period 1957-59 to nil in 1965 while exports to the German Federal Republic fell from 204 tons per annum in the period 1957-59 to 50 tons in 1965.

Vietnam

Total exports of cassia (Table 33) fell from an average of 999 tons per annum in the period 1957-59 to 416 tons per annum in the period 1963-65. Small quantities were exported to Singapore and Hong Kong but by far the largest importer was the USA which imported over 90 per cent of total Vietnamese exports in the years under review.

Taiwan

Small quantities of 'Cassia Lignea, buds and twigs' (Table 34) were exported from Taiwan, mainly to Japan and, in 1966, to the USA. Total exports rose from 3 tons per annum in the period 1960-62 to 53 tons in 1966. Taiwan imported considerably more than was exported and would appear to be merely carrying on a small entrepot trade with Japan and the USA with supplies obtained largely from Hong Kong. (See Imports into Taiwan, Table 38).

Imports of cassia

United States

Total imports of 'Unground cassia vera, including buds' (Table 35) fell from an average of 5,511.9 tons per annum in the period 1957-62 to 1,324.7 tons in 1963. Imports then rose to 7,071.3 tons in 1965 but fell to 3,805.1 tons in 1967. However, the annual average for the period 1964-67 was 5,413 tons.

The major source of US imports was Indonesia. Imports from Indonesia averaged 4,399 tons per annum over the period 1957-67, rising to a maximum of 6,669.4 tons in 1965 and falling to a minimum of 1,223.4 tons in 1963. Large quantities were also imported from Laos, Vietnam and Cambodia although these had declined considerably by 1967. In 1967 substantial quantities were imported from Malaysia and Taiwan.

The United States has, in the past, imported considerable quantities of Saigon cassia but supplies of this have been affected by the war in Vietnam. It could be that the increased use of cinnamon to replace the decline in supplies of cassia will lead to American users preferring it to cassia.

Belgium and Luxembourg

Although the Indonesian export figures show these two countries to be second only to the USA as importers in 1960-62 and the principal importers in 1957-59, this is not borne out by the import figures given in Table 36. This discloses that total

imports from 1957 to 1967 have never reached one hundred tons, the peak imports being 89 tons in 1966, most of which came from China (46 tons) and Indonesia (17 tons). Otherwise annual imports of 50 to 60 tons are more normal with the Netherlands, Ceylon, China and Indonesia all supplying some tonnage from time to time.

The only explanation that can be offered for the great discrepancy is that Indonesia consigns shipments to the international port of Antwerp, from where it is re-directed to other countries.

India

Total imports of cassia (Table 37) fell rapidly from an average of 1,237 tons per annum in the period 1957-59 to an average of 13 tons per annum in the period 1964-67.

China and Hong Kong were formerly the main suppliers but since 1964 all Indian imports of cassia have come from Malaysia and Singapore.

Japan

Imports of 'Cassia and cinnamon bark' (Table 38) rose from an average of 538 tons per annum in the period 1957-59 to around 1,000 tons per annum in the period 1965-67. The greater part of these totals must be cassia since the main sources were China, Indonesia, Taiwan and North Vietnam. China has been regularly the largest supplier and in 1967 contributed nearly 84 per cent of total Japanese imports.

Taiwan

Total imports of 'Cassia lignea, buds and twigs' (Table 39) rose from an average 87 tons per annum in the period 1960-62 to 195 tons in 1966. The main specified source was Hong Kong.

Iran

Small quantities of cassia are imported into Iran (Table 40), mainly from India and Pakistan. Total imports averaged 24 tons per annum throughout the period 1960-66.

PRICES

Tables 41 and 42 show quarterly average prices in the UK of cinnamon and of cassia lignea. Only two grades are shown in each table.

Cinnamon

The prices of true cinnamon are always greater than those of cassia. As one would expect, the prices of cinnamon quills grade 0000 (See Figure 1) are always greater than the prices of quillings, the broken quills. The differential is sometimes as great as 100 per cent.

Over the period 1957 to 1968 the prices of quillings were steadier than those of

Figure 1

Cinnamon Quarterly average prices, forward shipment London

Source: Perfumery and Essential Oils Record

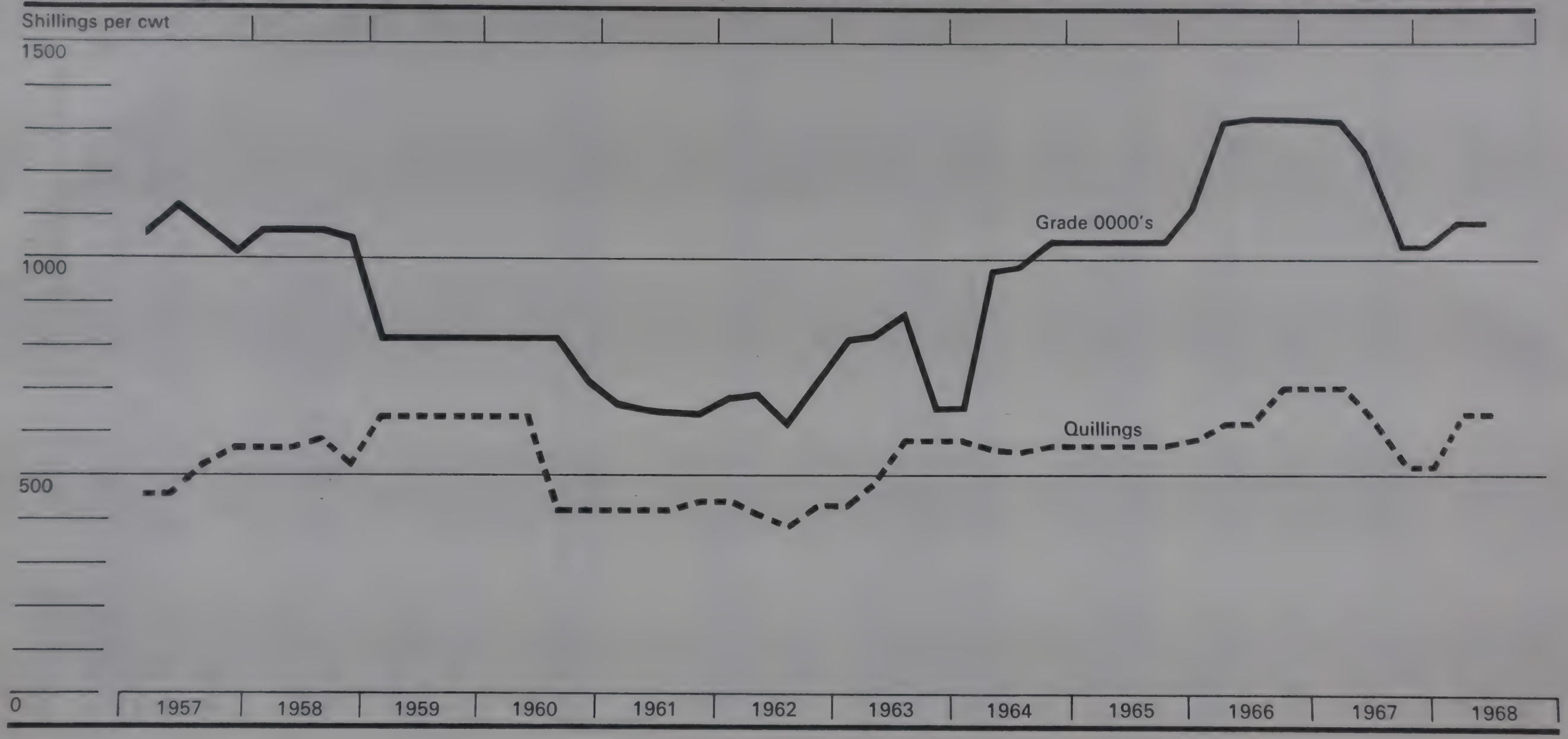
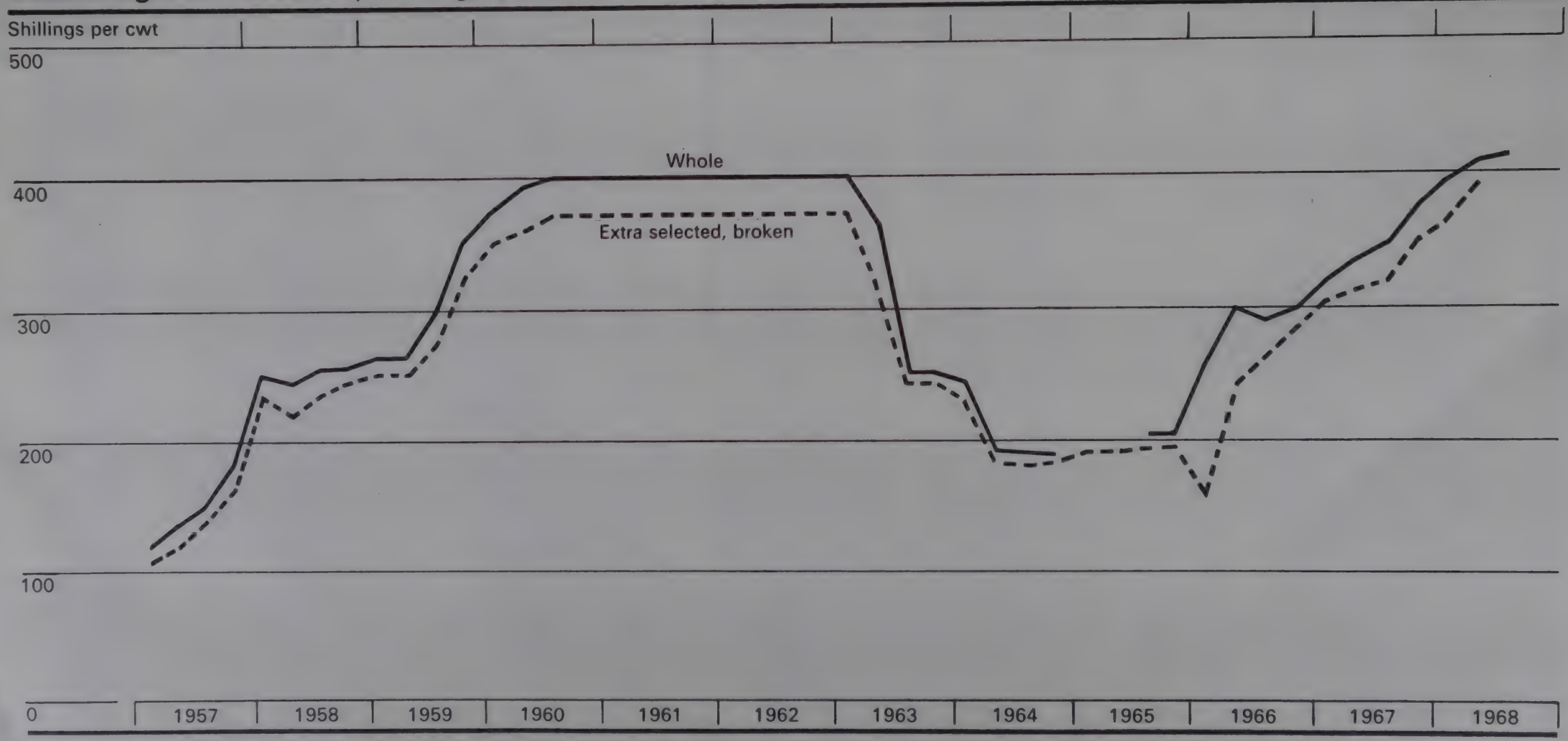


Figure 2

Cassia lignea Quarterly average prices, forward shipment London

Source: Perfumery and Essential Oils Record



quills. The quarterly average prices fluctuated about a mean of approximately 550/- per cwt., reaching a period maximum of 700/- per cwt. in the third quarter of 1966 and the first six months of 1967.

The price of quills, grade 0000, fell from 1,064/- per cwt. in the first quarter of 1957 to 625/- per cwt. in the third quarter of 1962. It then rose to 1,333/- per cwt. in the second half of 1966. In the second and third quarter of 1968 the price rose again to 2,916/- per cwt. In August 1969 cinnamon was quoted as follows:

	shillings per cwt. c.i.f.
0000 (f.a.q.)	1008/-
Quillings	537/-

Source: *Public Ledger*

Cassia

The prices of cassia lignea, whole, rose over the period 1957-68 from 120/- per cwt. in the first quarter of 1957 to 410/- per cwt. in the third quarter of 1968 (Figure 2). The prices in fact rose rapidly from 120/- to 400/- per cwt. in the second half of 1960 and steadied at this price until the first quarter of 1963. The price then fell to 185/- per cwt. in the fourth quarter of 1964 and then rose again to 410/- in 1968.

This price trend was closely reflected by movements of the price of broken cassia. The prices of 'extra selected broken cassia' were usually between 10/- and 30/- per cwt. less than that of whole cassia. No prices were quoted for broken cassia in the third quarter of 1968. On 1st October, 1968 whole cassia was quoted at 435/- per cwt. while broken cassia remained unquoted.

FUTURE PROSPECTS

Trade enquiries made in the United Kingdom indicate little change in the pattern of consumption of cinnamon in the last six or seven years. The main market is still the United States where consumption of cinnamon bark has increased rapidly in the last three years. Prior to this it was believed that production of cinnamon bark in the Seychelles, the major supplier, could be expanded almost immediately to meet any increases in demand. This is thought to be the case no longer and rises in the price of Seychelles cinnamon bark was expected. The reason for this is that producers, in the past, have been dissatisfied with their returns in contrast to what they have thought the exporters to be receiving and have accordingly declined to collect the cinnamon bark. This situation has been aggravated by a move of labour away from agriculture to working on road-building and other public works financed by US Defence appropriations.

The price of fine cinnamon quills from Ceylon increased very rapidly in mid-1968. It is thought that there may be a move towards the cheaper Ceylon cinnamon chips in the UK and, possibly, in the US. No significant increases in UK demand or further increases in US demand are expected.

Chinese cassia is considered to be too highly priced to be used in any significant quantities in the UK, while its use is prohibited in the US. The main source of US imports of cassia is Indonesia. Supplies of Penang cassia and Indonesian cassia have been somewhat short of late and the increase in US demand for cinnamon in

the last three years has been met largely, therefore, with increases in imports of Seychelles cinnamon bark.

One UK importer felt that the market for cinnamon would be able to absorb a 'long term orderly increase' in production but warned that an increase in supply of, say, 10 per cent, could well cause the price to fall very rapidly.

Although no increases in demand are foreseen for either cinnamon or cassia, the possibility of reduced supplies of bark from the Seychelles has to be borne in mind. However, new producing countries are unlikely to benefit from this since existing producers will be able more easily to take advantage of the situation. It might also be pointed out that those countries ecologically suited to growing cinnamon and cassia are already doing so.

CINNAMON OILS

The oils which may be obtained from both true cinnamon and from cassia are among the most important spice oils.

Cinnamon bark oil

Cinnamon bark oil is obtained by steam distillation of the bark of *C. zeylanicum* and is considered by the trade to be the finest type of cinnamon oil.

The oil, a pale yellow, somewhat oily liquid, is distilled mainly from cinnamon chips but also from inferior quality bark. The oil is obtained in yields of around 0.2 per cent. The main constituents of Ceylon cinnamon bark oil are cinnamic aldehyde (55-65 per cent), eugenol (5-18 per cent) and methyl-n-amyl betene. The oil is used, to some extent, in perfumery, and extensively in flavouring.

The oil used not to be distilled in the countries producing the bark and the best quality oil still comes from the USA and Europe. However, there is now some local distillation in Ceylon, the Seychelles and India. The centre of production is Ceylon. Although attempts are being made to improve the method of preparation and hence the quality of bark, Seychelles bark oil is still regarded as inferior to bark oil from Ceylon, and is normally sold at a discount. Some Seychelles bark oil failed to meet the requirements of the British Pharmacopoeia and there is, therefore, a tendency for producers in the Seychelles to concentrate on the production of leaf oil and also to export the bark.

Exports

The main exporter of cinnamon bark oil is Ceylon (Table 43). Over the period 1957-67 total exports from Ceylon averaged 1,700 lb. per annum but from 1963 to 1967 this average has not been reached. In 1964 and 1965 just over 1,000 lbs. were exported and it was not until 1966 and 1967 that exports pushed up to 1,500 lb. a year.

Imports

The only country for which import statistics are available is India (Table 44). Imports came mainly from France and the Netherlands and increased from an average 500 lb. per annum in the period 1957-59 to 1,700 lb. in 1963. Imports then fell to 1,200 lb. in 1964.

Prices

Table 45 lists quarterly average UK prices of cinnamon bark oil. The price was steady at 192.0 shillings per lb. from 1957 until the first quarter of 1962. It fell to 168.0 shillings per lb. in the third quarter of 1962 and remained at this level until the end of 1963. The price then began to rise until in the second quarter of 1964 it rose very rapidly to 472.0 shillings per lb. The rise continued until a price of 700.8 shillings was attained in the last quarter of 1967 and the first of 1968. The price then fell to 440.0 shillings per lb. in the third quarter of 1968. This price was still current in October 1968. The rise in prices may be attributable to greater demand for bark, especially from the USA, reducing bark availability for distillation.

Future prospects

The demand for cinnamon bark oil in the UK has changed little in recent years and trade enquiries indicate that changes are unlikely in the near future, trade continuing to be small and steady.

Cinnamon leaf oil

Cinnamon leaf oil is obtained by steam distillation of the fresh leaves of *C. zeylanicum*. Yields of between 0.6 and 0.8 per cent v/w are obtained.

The main sources of supply are Ceylon and the Seychelles although, owing to labour shortages, new supplies of Seychelles oil were almost unobtainable in 1968.

Oils from the two sources differ in the amount of eugenol they contain. The Seychelles oil has a eugenol content of approximately 90 per cent whereas the Ceylon oil contains between 70 and 75 per cent.

Cinnamon leaf oil is used in spice flavours, in perfumery and as a source of eugenol. The eugenol is used for the production of vanillin or is converted to iso-eugenol for use in confectionary products.

In recent years the Seychelles oil has been more in demand in world markets, being a better source of eugenol. Some users in the flavour industry consider that redistilled Seychelles oil is of a comparable quality to Ceylon oil while being considerably cheaper. However, these users have now changed to Ceylon cinnamon leaf oil because of the shortage of Seychelles oil and enquiries made in the UK suggest that they are unlikely to change back again.

Users in the perfumery industry, while tending to have a slight preference to Ceylon oil, use either oil depending on which is cheaper.

Manufacturers of eugenol tend to use whichever source of eugenol is cheapest and in recent years many have switched to clove leaf oil which contains a minimum of 82 per cent eugenol. Table 5 shows comparative prices of the various eugenol sources:

Table 5
Eugenol sources – comparative prices

Oil	Eugenol Content %	Price per lb. London c.i.f.	Price per lb. New York f.o.b.	
Cinnamon leaf – Seychelles	95	20/-		
Ceylon New crop	70/75	17/-	24/7	25/-
Clove leaf – Madagascar	)	12/9		
Seychelles	)	10/9		
Crude	) 80/85		11/8	17/6
Rectified	)		15/-	21/8
Clove bud – English dist.	)	n.q.		
Madagascar/unrect.	) 80/85	12/-		
US	)		21/8	31/3
Bay	90	37/6	48/9	56/3
Pimento leaf	80	24/-	25/10	33/4
Pimento berry – English dist.	80)	390/-		

n.q. Not quoted

Source: *Perfumery and Essential Oils Record* 1/10/68
Oil, Paint and Drug Reporter 25/11/68
Chemist and Druggist. 14/12/68

The demand for eugenol has, itself, fallen as eugenol has become a less important source of vanillin. The US is the main producer and user of vanillin and there the greater part of consumption is of lignin vanillin. Lignin vanillin is produced from the waste sulphite liquors of paper mills and is approximately half the price of eugenol vanillin, now derived mainly from clove oil, and ethyl vanillin, produced from coal tar extracts.

Exports

The main exporters of cinnamon leaf oil are the Seychelles and Ceylon.

Exports from the Seychelles (Table 46) averaged 170,600 lb. per annum in the period 1957-59 and 174,100 lb. per annum in the period 1960-62. A decline to 145,500 lb. in 1963 was followed by an upsurge the following year to 166,600 lb. but by 1966 exports had declined to 106,000 lb. Exports to France rose from 4,900 lb. per annum in the period 1957-59 to 37,500 lb. in 1966. Exports to the United States averaged 33,500 lb. over the period 1957-66, reaching a period maximum in 1964. The main contributors to the general fall in exports of the oil since 1960 have been the UK and the Netherlands. Exports to the UK fell from 82,400 lb. in 1963 to 15,000 lb. in 1966. Exports to the Netherlands averaged 74,000 lb. per annum in the period 1960-62 but only 6,800 lb. per annum in the period 1963-66.

Exports of leaf oil from Ceylon (Table 47) fell somewhat from an average of 65,800

lb. per annum in the period 1957-59 to an average of 44,300 lb. per annum in the period 1963-67. The main importer throughout the period 1957-67 was the United States which imported 58.6 per cent of Ceylonese exports of leaf oil in 1967. Exports to the United Kingdom fell from an average of 16,700 lb. per annum in the period 1957-59 to an average of 5,200 lb. in the period 1963-67. Exports to India were running at an average of 7,000 lb. in 1957-59 but then declined markedly until 1965 when they rose by 1,000 lb. from 600 lb. in the previous year. The two following years showed increases and they were 5,400 lb. by 1967.

Imports

Statistics of imports into the United States (Table 48) are only available until 1964 and are recorded as imports of 'Cinnamon leaf oil and cinnamon oil'. Total imports increased from an average of 57,200 lb. per annum in the period 1957-59 to 80,000 lb. in 1963 but fell to 63,900 lb. in 1964. The main suppliers were the Seychelles and Ceylon. In the period 1957-62 the Seychelles and Ceylon were of roughly equal importance but since 1963 the Seychelles have become more so. In 1964, 67 per cent of US imports came from the Seychelles and 32 per cent from Ceylon.

Imports into India (Table 49) fell from an average of 12,000 lb. per annum in the period 1957-59 to 4,900 lb. in 1964 but then rose to 13,000 lb. in 1967. Indian imports come mainly from Ceylon and the Netherlands.

Imports into Japan (Table 50) increased from an average of 700 lb. per annum in the period 1957-59 to 9,600 lb. in 1966 but fell to 2,900 lb. in 1967. Imports come mainly from France, the Netherlands and the United Kingdom.

Prices

Table 51 lists quarterly average UK price of Cinnamon leaf oils from Ceylon and the Seychelles. Both price series exhibited a rising trend over the period 1957 to 1968. From 1957-63 Ceylon leaf oil was steady about an average of 11.1 shillings per lb. No price is quoted for the first quarter of 1964. In the second quarter the price increased rapidly to 24.2 shillings per lb. In this period also the price of bark oil rose and it appears likely that both these increases occurred through scarcity of bark for distilling leading to shortages of bark oil and a heavier demand for the inferior leaf oil. The price fell to 18.3 shillings per lb. for six months and then rose to 26.7 shillings per lb. at the end of 1965. The price fell to 16.6 shillings in the second quarter of 1967 and then recovered to 18.1 shillings in the third quarter of 1968. In October 1968 Ceylon leaf oil was quoted at 17.0 shillings per lb.

The price of Seychelles leaf oil rose steadily from 6.5 shillings per lb. in the fourth quarter of 1957 to 9.0 shillings per lb. at the end of 1964. Then followed a generally steady increase each year, reaching 19.8 shillings in the second and third quarters of 1968. In October 1968 Seychelles cinnamon leaf oil was reported to be scarce and was quoted at 20.0 shillings per lb.

Future prospects

Enquiries made in the UK trade indicate that demand for cinnamon leaf oil is unlikely to expand although there might be a market for a good quality Seychelles oil. This is not likely to be a large market because the shortage of Seychelles oil has caused a move over by users to the Ceylon oil. It might now be too late for the Seychelles to recapture the market share it has lost but prospects for a new producer are not hopeful because supplies of the Ceylon oil are expected to be adequate.

Cassia oil

Cassia oil, sometimes known as Chinese cinnamon oil, is obtained by distillation of

the leaves, twigs, and occasionally pieces of bark, of *C. cassia.* Under local conditions yields of around 0.31 per cent are claimed(2).

Crude, locally distilled oil, is a brownish yellow to dark brown liquid. The oil is usually rectified before use when it becomes a pale yellow liquid. Cassia oil has a higher aldehyde content (70-95 per cent cinnamic aldehyde) than Ceylon cinnamon bark oil and is altogether a stronger, more harshly flavoured oil.

It should be noted that, unlike cinnamon oils, cassia bark oil and cassia leaf oil have the same composition.

No statistics of current production are available but in 1960 it was estimated(1) that annual production was between 175 and 200 metric tons.

Cassia oil is rarely used in perfumery because of its colour. When used in flavours the rectified oil is used mainly in the cheaper types of spice essences. The crude oil is sometimes used in flavours, its content of resinous matter giving it great odour tenacity.

A limited quantity of cassia oil is distilled in the United Kingdom from cassia bark. This is used in the UK and is also exported, one of the recorded markets being Japan whose imports are shown in Table 52.

It is understood that little or no natural cassia oil is available in the USA. This is because of trouble with adulterated cassia oil in the past and because of the US ban on imports from China.

The flavour of cassia oil can be reproduced satisfactorily by the use of low cost synthetics such as cinnamic aldehyde, alpha-methyl furanacrolein etc. Cassia oil is not quoted in the United States but cinnamic aldehyde was quoted at US $ .98 per lb. on 11th November 1968. The following prices were quoted in the UK on 1st October 1968 *(Perfumery and Essential Oils Record).*

	Shillings and pence/lb. c.i.f.
Cassia oil	19.6
Cinnamic aldehyde, synthetic, according to quantity and pack	8/6 – 9/6

Exports

The only available export statistics are of exports from Hong Kong (Table 52) which will probably be of oil originating in China. Total exports averaged 63,600 lb. per annum in the period 1957-59 and then fell fairly steadily to 10,200 lb. in 1967. The main importers were Canada, Japan and Malaysia and Singapore.

Imports

Imports of cassia oil into Japan (Table 53) averaged 18,800 lb. per annum over the period 1957-67, reaching a period maximum of 25,400 lb. in 1966. Table 6 shows the main sources of Japanese imports.

Table 6
Cassia oil – imports into Japan
(Percentage by country of origin)

From:	1957-59	1963	1967
UK	1	25	39
China	38	29	33
Hong Kong	41	28	14
Other countries	20	18	14

Source: Derived from *Trade of Japan*

It may be seen that at the expense of supplies from Hong Kong, purchases from the UK and China increased notably.

Prices

Table 54 lists quarterly average UK prices of cassia oil. At the beginning and end of the survey period cassia oil was comparable in price to cinnamon leaf oil. The price of cassia oil was steady at around 13.5 shillings per lb. for 1957, 1958 and the first half of 1959. The price then rose to 15.3 shillings per lb. in the first quarter of 1960. No further offers were made from China and, therefore, no prices were quoted until the second quarter of 1961 when the price was 37.3 shillings per lb. The price rose rapidly to 80.0 shillings in the third quarter of 1962 when supplies were practically unobtainable and then fell steadily to 19.1 shillings per lb. in the third quarter of 1968. In October 1968 cassia oil was quoted at 19.5 shillings per lb. c.i.f.

Prospects

At the high prices mentioned above, it is considered unlikely that contracts would be arranged. Even at the current, more realistic prices there seems to be little likelihood of expanding the market for cassia oil and the demand that exists can probably be satisfied by existing producers or, in times of shortage, by the substitution of lower priced synthetics.

Appendices

APPENDIX 1

Note: The following list gives the names of some of the firms which are known to the Tropical Products Institute to be trading in this commodity, but the list should not be regarded as exhaustive. Inclusion in the list should not be taken to imply any recommendation by TPI.

FIRMS TRADING IN CINNAMON

United Kingdom

Cinnamon

H. E. Daniel and Co. Ltd.,
St. Bernard Works,
Stoney Lane,
LONDON, S.E.19.

Evans, Gray and Hood Ltd.,
110, Cannon Street,
LONDON, E.C.4.

H. Frischmann,
Terminus House,
16, North End Road,
LONDON, N.W.11.

John Kelly's Ltd.,
Ibex House,
Minories,
LONDON, E.C.3.

Cassia lignea

Evans, Gray and Hood Ltd.

John Ronaldson & Co.,
454, Grand Buildings,
Trafalgar Square,
LONDON, W.C.2.

United States of America

Cinnamon and Cassia

Archibald & Kendall Inc.,
487, Washington Street,
New York,
N.Y. 10013.

Jacobus F. Frank & Co. Inc.,
99, Wall Street,
New York,
N.Y.10005.

Meer Corp.,
318, West 46th Street,
New York,
N.Y. 10036.

FIRMS TRADING IN CASSIA OIL, CINNAMON BARK OIL AND CINNAMON LEAF OIL

United Kingdom

Bush Boake Allen Ltd.,
Blackhorse Lane,
Walthamstow,
LONDON, E.17.

Dragoco (G.B.) Ltd.,
Tallon Road,
Hutton Industrial Estate,
BRENTWOOD,
Essex.

Gale and Mount Ltd.,
Commerce House,
Commerce Road,
BRENTFORD,
Middlesex.

W. H. Hobbs & Co. Ltd.,
166, Tower Bridge Road,
LONDON, S.E.1.

R. C. Treatt & Co. Ltd.,
19, Watling Street,
LONDON, E.C.4.

Chas. Zimmermann & Co. Ltd.,
Daga Works,
Walmgate Road,
PERIVALE,
Middlesex.

United States of America

J. Manheimer Inc.,
380, 2nd Avenue,
New York,
N.Y.10010.

Norda Essential Oil & Chemical Co. Inc.,
475, 10th Avenue,
New York,
N.Y.10018.

S. B. Penick & Co.,
100, Church Street,
New York,
N.Y.10007.

Ungerer & Co.,
161, Avenue of the Americans,
New York,
N.Y.10013.

APPENDIX 2

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Statistical Appendix

Table 7
Cinnamon Quills
Exports from Ceylon

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	Tons	2,265	2,539	2,382	2,535	2,368	2,355	2,639
of which to:	£'000	1,328	1,083	1,400	1,842	2,069	2,190	2,236
Belgium and Luxembourg	Tons	21	11	5	8	5	3	7
	£'000	12	5	4	7	5	4	8
Denmark	Tons	6	7	7	14	9	3	7
	£'000	4	3	4	10	8	3	7
France	Tons	7	7	4	5	7	6	4
	£'000	3	2	2	3	6	6	3
German Federal Republic	Tons	101	97	109	121	93	81	132
	£'000	80	59	83	101	100	100	122
Italy	Tons	90	90	116	77	79	85	77
	£'000	55	42	74	60	74	91	75
Netherlands	Tons	58	54	32	60	23	19	15
	£'000	30	24	20	52	23	22	15
Spain	Tons	88	105	97	61	75	67	104
	£'000	66	60	72	54	75	70	104
United Kingdom	Tons	29	15	9	12	9	–	–
	£'000	14	6	5	8	6	–	–
South Africa	Tons	13	8	2	3	7	2	4
	£'000	4	3	2	2	6	2	4
Argentina	Tons	22	29	15	10	5	4	10
	£'000	9	9	6	8	4	3	8
Canada	Tons	2	3	3	4	3	1	1
	£'000	2	2	2	3	3	1	1
Chile	Tons	27	52	61	37	28	50	47
	£'000	16	19	34	23	23	44	36
Mexico	Tons	1,013	1,209	814	956	904	865	1,201
	£'000	576	504	487	714	806	829	1,036
Peru	Tons	176	203	228	240	210	173	195
	£'000	104	75	115	156	166	147	151
United States	Tons	335	396	657	596	679	754	642
	£'000	190	167	367	423	573	652	532
Other American	Tons	265	228	213	318	224	238	189
	£'000	153	92	117	208	183	211	129
Other countries	Tons	12	25	10	13	8	4	4
	£'000	10	11	6	10	8	4	5

– Nil or negligible

Source: *Ceylon Customs Returns Government Press*

Table 8
Cinnamon Chips
Exports from Ceylon

		1957-59 average	1960-62 average	1963	1964	1965	1966	1967
Total	Tons	252	332	430	307	371	358	397
of which to:	£'000	24	45	78	50	73	87	91
Denmark	Tons	–	–	–	–	–	–	36
	£'000	–	–	–	–	–	–	7
German Federal Republic	Tons	1	10	11	21	9	1	6
	£'000	–	3	3	6	3	–	1
Italy	Tons	–	9	16	10	19	22	27
	£'000	–	2	6	4	8	9	13
Netherlands	Tons	9	54	64	36	50	33	–
	£'000	1	6	10	8	8	6	–
United Kingdom	Tons	15	28	27	24	58	72	57
	£'000	1	9	11	9	23	34	24
South Africa	Tons	17	22	40	36	20	30	40
	£'000	2	4	12	12	7	8	12
Argentina	Tons	33	36	49	43	38	28	31
	£'000	4	5	8	8	6	5	8
Australia	Tons	129	117	146	101	129	122	138
	£'000	12	9	12	9	11	15	15
New Zealand	Tons	26	30	23	24	29	33	33
	£'000	3	3	2	2	3	4	5
Other countries	Tons	22	26	54	12	19	17	29
	£'000	1	4	14	1	4	6	6

Source: *Ceylon Customs Returns Government Press*
– Nil or negligible

Table 9
Cinnamon Bark
Exports from Seychelles

		1957-59 average	1960-62 average	1963	1964	1965	1966
Total	Tons	888	1,044	991	1,155	1,849	1,504
of which to:	£'000	44.8	63.8	54.4	62.6	168.2	131.2
Denmark	Tons	7	10	10	5	9	5
	£'000	0.4	0.6	0.5	0.3	0.9	0.4
France	Tons	43	96	78	82	78	81
	£'000	1.9	5.5	3.9	4.3	6.0	6.9
German Federal Republic	Tons	147	135	114	106	111	127
	£'000	9.0	10.5	8.2	7.8	11.8	14.4
Ireland	Tons	–	4	15	6	15	10
	£'000	–	0.5	0.8	0.2	0.9	1.1
Italy	Tons	3	13	20	16	13	4
	£'000	0.2	0.7	1.2	0.7	1.3	0.3
Netherlands	Tons	62	90	88	79	356	89
	£'000	3.0	5.9	5.1	5.0	33.9	8.3
United Kingdom	Tons	470	429	398	358	537	438
	£'000	21.5	24.7	20.5	17.2	47.7	38.5
Lebanon	Tons	–	9	3	32	–	60
	£'000	–	0.6	0.1	1.7	–	5.1
South Africa	Tons	16	14	64	12	16	11
	£'000	0.7	0.8	3.5	0.7	1.7	1.0
Canada	Tons	22	32	17	21	7	5
	£'000	1.3	1.8	0.8	1.0	0.5	0.4
United States	Tons	102	171	153	433	701	590
	£'000	5.9	9.9	7.9	23.1	63.1	49.2
Australia	Tons	–	–	–	–	–	52
	£'000	–	–	–	–	–	3.7
Other countries	Tons	16	41	31	5	6	32
	£'000	0.9	2.3	1.9	0.6	0.4	1.9

Source: *Trade Report H.M. Customs and Harbours*
– Nil or negligible

Table 10
Cinnamon Quills
Exports from Seychelles

		1957-59 Average	1960-62 Average	1963	1964	1965	1966
Total	Tons	5	7	9	6	10	11
of which to:	£'000	2.0	1.9	2.5	2.9	5.5	6.6
Netherlands	Tons	–	–	1	1	1	1
	£'000	–	–	0.4	1.0	0.7	0.8
United Kingdom	Tons	4	7	8	4	8	8
	£'000	1.5	1.9	2.1	1.5	4.1	3.6
Other countries	Tons	1	–	–	1	1	2
	£'000	0.5	–	–	0.4	0.7	2.2

Source: *Trade Report H.M. Customs and Harbours*
– Nil or negligible

Table 11
Cinnamon and Flower
Exports from Madagascar

		1957-59 average	1960-62 average	1963	1964	1965	1966
Total	Tons	8	26	71	210	272	557
of which to:	£'000	1.4	3.1	6.1	26.6	46.4	99.5
France	Tons	8	25	70	169	118	170
	£'000	1.4	2.8	5.9	19.5	23.4	19.8
German Federal Republic	Tons	–	–	–	34	76	62
	£'000	–	–	–	5.0	10.5	10.0
Italy	Tons	–	–	–	–	14	21
	£'000	–	–	–	–	2.0	6.1
Netherlands	Tons	–	–	–	2	15	17
	£'000	–	–	–	0.3	2.0	2.9
Spain	Tons	–	–	1	-	11	51
	£'000	–	–	0.2	–	3.0	17.0
Algeria	Tons	–	–	–	–	–	22
	£'000	–	–	–	–	–	3.7
United States	Tons	–			–	25	212
	£'000	–				3.5	39.6
Other countries	Tons	–	1	–	5	13	2
	£'000	–	0.3	–	1.8	2.0	0.4

Source: *Commerce Extérieur*
Institut National de la Statistique et de la Récherche Economique
Formerly: Ministere des Finances

– Nil or negligible

Table 12
Cinnamon
Exports from Malaysia and Singapore

		1960-62 Average (a)	1963	1964	1965
Total	Tons	757	114	24	67
of which to:	£'000	89.6	13.7	5.6	15.1
France	Tons	55	24	–	–
	£'000	5.8	3.0	–	–
German Federal Republic	Tons	146	5	–	–
	£'000	16.8	0.6	–	–
Burma	Tons	–	–	13	11
	£'000	–	–	2.5	2.3
Hong Kong	Tons	9	26	–	–
	£'000	1.2	2.8	–	–
India	Tons	1	5	1	11
	£'000	0.4	0.7	0.3	2.2
Japan	Tons	47	12	1	-
	£'000	5.3	1.2	1.1	–
Thailand	Tons	23	11	3	8
	£'000	2.9	1.7	0.5	1.5
Canada	Tons	32	5	–	–
	£'000	4.1	0.5	–	–
United States	Tons	245	–	–	31
	£'000	30	–	–	7.7
Other countries	Tons	199	26	6	6
	£'000	50.1	3.2	1.2	1.4

Source: *External Trade Statistics Department of Statistics, Singapore*
(a) 1962 year shown. Information not available before this year
– Nil or negligible

Table 13
Cinnamon
Exports from Hong Kong

		1959 (a)	1960-62 Average	1963	1964	1965	1966	1967
Total	Tons	3.4	0.4	5.0	10.2	15.1	9.8	21.0
of which to:	£'000	5.1	0.4	1.1	1.8	6.0	1.9	18.9
China	Tons	3.0	–	–	0.2	5.2	–	3.4
	£'000	4.5	–	–	0.5	5.1	–	13.9
Malaysia	Tons	–	–	2.0	–	–	–	–
	£'000	–	–	0.5	–	–	–	–
Singapore	Tons	–	–	–	10.0	9.8	9.8	7.4
	£'000	–	–	–	1.3	0.9	1.9	2.4
Other countries	Tons	0.4	0.4	3.0	–	0.1	–	10.2
	£'000	0.6	0.4	0.6	–	–	–	2.6

Source: *Hong Kong Trade Statistics Department of Commerce and Industry*
(a) Not separately shown for 1957 & 1958
– Nil or negligible

Table 14
Cinnamon and Chips, Unground
Imports into United States

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	Tons	414.1	366.2	658.3	562.9	1,363.4	1,032.6	1,943.4
of which from:	£'000	150.7	109.0	259.9	244.8	389.0	365.9	636.6
Spain	Tons	–	–	–	–	–	24.6	14.7
	£'000	–	–	–	–	–	7.2	5.4
Ceylon	Tons	190.0	173.7	408.3	307.7	334.7	285.4	482.4
	£'000	117.6	81.4	239.6	227.8	288.9	267.8	444.5
India	Tons	3.5	5.5	–	15.0	5.0	–	10.0
	£'000	2.7	1.3	–	0.8	0.5	–	1.3
Indonesia	Tons	1.6	6.0	0.4	0.6	3.7	–	10.6
	£'000	0.1	4.6	0.1	0.2	1.2	–	10.5
Seychelles	Tons	193.6	150.1	214.8	233.2	980.8	469.1	1,128.8
	£'000	24.6	13.1	14.4	15.0	93.3	53.1	131.1
Kenya, Uganda, Tanzania	Tons	1.1	21.7	22.5	5.0	10.0	40.2	21.1
	£'000	0.1	2.0	1.7	0.6	0.7	5.8	5.3
Madagascar	Tons	–	–	–	–	9.8	174.5	215.3
	£'000	–	–	–	–	1.4	26.4	33.4
Leeward and Windward Islands	Tons	3.0	–	2.4	–	–	–	–
	£'000	1.1	–	0.9	–	–	–	–
Other countries	Tons	21.3	9.2	9.9	1.4	19.4	38.8	60.5
	£'000	4.5	6.6	3.2	0.4	2.9	5.6	5.1

Source: *Bureau of the Census Report F.T.110 Department of Commerce*
– Nil or negligible

Table 15
Cinnamon of all Kinds, Not Pulverised
Imports into Mexico

		1957-59 Average	1960-62 Average	1963	1964	1965	1966
Total	Tons	955	1,206	1,211	1,010	797	1,041
of which from:	£'000	577.3	555.3	731.8	919.4	780.9	1,071.4
Ceylo							
Ceylon	Tons	839	1,115	765	763	613	881
	£'000	508.9	514.1	538.3	692.3	606.0	910.7
Indonesia	Tons	1	–	261	–	–	–
	£'000	0.4	–	62.3	–	–	–
United States	Tons	110	81	178	245	182	149
	£'000	65.5	36.6	129.2	224.7	173.1	149.1
Other countries	Tons	5	10	7	2	2	11
	£'000	2.5	4.6	2.0	2.4	1.8	11.6

Source: *Comercio Exterior Direccion General De Estadistica*
– Nil or negligible

Table 16
Cinnamon of All Kinds, Pulverised
Imports into Mexico

		1957-59 Average	1960-62 Average	1963	1964	1965	1966
Total	Tons	29	32	2	–	–	–
of which from:	£'000	9.3	10.7	0.6	0.3	0.1	0.2
United States	Tons	25	27	2	–	–	–
	£'000	6.9	8.7	0.6	0.1	0.1	0.2
Other countries	Tons	4	5	–	–	–	–
	£'000	2.4	2.0	–	0.2	–	–

Source: *Comercio Exterior Direccion General De Estadistica*
– Nil or negligible

Table 17
Cassia and Cinnamon
Imports into German Federal Republic

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	Tons	651	730	718	818	812	744	. . .
of which from:	£'000	115.5	175.2	184.4	224.5	245.1	253.5	. . .
Ceylon	Tons	96	110	121	120	109	96	. . .
	£'000	83.9	71.6	92.8	109.8	107.7	111.0	. . .
China	Tons	167	5	5	187	455	462	. . .
	£'000	17.5	2.2	2.0	36.5	91.5	107.6	. . .
Hong Kong	Tons	32	–	–	–	–	– –	. . .
	£'000	5.4	–	–	–	–	–	. . .
Indonesia	Tons	211	457	429	326	73	4	. . .
	£'000	34.9	81.8	66.6	55.8	16.4	2.1	. . .
Malaysia	Tons	14	19	–	–	11	–	. . .
	£'000	2.2	3.3	–	–	2.7	–	. . .
Singapore	Tons	7	10	62	–	–	–	. . .
	£'000	1.2	1.8	9.0	–	–	–	. .
Madagascar	Tons	–	–	–	28	76	72	. . .
	£'000	–	–	–	5.2	12.5	13.8	. . .
Mauritius	Tons	–	–	–	–	74	103	. . .
	£'000	–	–	–	–	9.5	13.7	. . .
Zanzibar	Tons	70	118	83	133	–	–	. . .
	£'000	5.7	11.9	9.1	13.2	–	–	. . .
Other countries	Tons	54	11	18	24	14	7	
	£'000	4.7	2.6	4.9	4.0	4.8	5.3	

Source: *Deraussenhandel Statistisches Bundesamt*
– Nil or negligible
. . .Information not available ole

Table 18
Cinnamon or Cassia
Imports into United Kingdom

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967 (a)
Total	Tons	653	552	530	490	553	596	541
of which from:	£'000	71	73	65	59	90	114	101
Ceylon	Tons	41	42	43	32	70	62	75
	£'000	16	18	22	18	28	36	30
China	Tons	42	27	–	–	–	–	2
	£'000	6	8	–	–	–	–	–
Hong Kong	Tons	22	–	–	–	–	–	9
	£'000	2	–	–	–	–	–	3
Seychelles	Tons	486	429	453	399	439	478	414
	£'000	37	36	35	29	49	61	51
Algeria	Tons	10	–	–	–	–	–	–
	£'000	2	–	–	–	–	–	–
Other countries	Tons	52	54	34	59	44	56	41
	£'000	8	11	8	12	13	17	17

Source: *The Trade of the United Kingdom H.M. Customs & Excise*
(a) Subject to amendment
– Nil or negligible

Table 19
Cinnamon and Cinnamon-tree Flowers
Imports into Netherlands

		1957-59 Average	1960-62 Average (a)	1963	1964	1965	1966	1967
Total	Tons	373	450	389	514	554	389	375
of which to:	£'000	58.4	76.8	60.8	91.3	134.2	94.5	107.3
Belgium and Luxembourg	Tons	–	15	25	–	3	–	1
	£'000	–	1.2	3.9	–	0.8	–	0.7
German Federal Republic	Tons	7	3	33	11	13	11	–
	£'000	1.4	0.5	4.7	2.3	4.1	1.4	–
Ceylon	Tons	15	14	39	5	14	6	12
	£'000	5.8	2.8	8.0	2.9	4.3	3.1	3.3
China	Tons	22	–	–	–	107	185	81
	£'000	2.9	–	–	–	23.3	42.6	23.0
Indonesia	Tons	250	346	245	432	207	43	121
	£'000	35.8	63.0	37.1	78.1	52.6	14.4	53.4
Malaysia, Singapore	Tons	58	27	27	10	107	32	11
	£'000	9.6	4.7	4.1	1.7	28.5	12.4	4.6
Mauritius, Seychelles	Tons	–	11	–	–	12	58	82
	£'000	–	1.1	–	–	2.0	7.9	9.7
Zanzibar	Tons	–	–	12	26	14	–	–
	£'000	–	–	1.5	2.4	1.4	–	–
Mexico	Tons	–	–	–	–	33	–	–
	£'000	–	–	–	–	9.2	–	–
Other countries	Tons	21	34	8	30	44	54	67
	£'000	2.9	3.5	1.5	3.9	8.0	12.7	12.6

Source: *Maandstatistiek Van De In-Uit-Voer Centraal Bureau Voor De Statistiek*
(a) Average for 2 years. 1961 unobtainable
– Nil or negligible

Table 20
Cinnamon and Cinnamon-tree Flowers
Imports into Sweden

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	Tons	329	280	251	312	285	285	252
of which from:	£'000	37.7	53.6	42.7	61.9	62.6	101.8	91.0
Belgium and Luxembourg	Tons	–	–	–	–	–	17	26
	£'000	–	–	–	–	–	16.5	16.5
China	Tons	44	–	–	28	155	177	105
	£'000	5.1	–	–	4.8	28.9	41.4	28.5
India	Tons	6	5	15	8	-	11	25
	£'000	1.1	1.0	2.4	1.4	–	6.3	8.4
Indonesia	Tons	143	255	221	261	105	61	60
	£'000	23.5	49.4	37.7	52.1	27.1	32.4	30.3
Other countries	Tons	136	20	15	15	25	19	36
	£'000	8.0	3.2	2.6	3.6	6.6	5.2	7.3

Source: *Sveriges Införsel Och Utförsel Statistiska Centralbyran*

– Nil or negligible

Table 21
Cinnamon, Whole
Imports into Italy

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967 (a)
Total	Tons	117	156	216	198	188	181	183
of which from:	£'000	61.0	65.6	83.3	94.6	100.9	115.8	106.4
Ceylon	Tons	73	94	149	108	93	101	95
	£'000	50.0	50.1	69.3	77.1	77.8	94.0	78.8
China	Tons	24	26	25	32	42	33	...
	£'000	5.8	8.0	5.7	6.3	9.9	8.3	...
India	Tons	–	1	7	1	2	11	...
	£'000	0.3	0.2	1.7	0.7	0.8	1.3	...
Indonesia	Tons	9	20	22	34	17	7	...
	£'000	1.8	3.7	3.9	6.9	4.1	2.7	...
Madagascar	Tons	–	1	2	2	8	22	...
	£'000	0.1	0.4	0.8	0.7	1.8	4.9	...
Tanzania, Zanzibar & Pemba	Tons	–	4	7	16	1	–	...
	£'000	–	0.3	0.7	1.7	0.1	–	...
Other countries	Tons	11	10	4	5	25	7	88
	£'000	3.0	2.9	1.2	1.2	6.4	4.6	27.6

Source: *Comercio Con L'Estero Instituto Centrale Di Statistics*
(a) Subject to amendment
... Information not available
– Nil or negligible

Table 22
Cinnamon, Unground
Imports into Iran

		1957-59 Average	1960-62 Average	1963 (a)	1964 (a)	1965 (a)	1966 (a)
Total	Tons	...	189	165	213	334	108
of which from:	£'000	...	56.4	53.4	46.0	69.7	18.4
China	Tons	...	43	114	141	197	5
	£'000	...	12.2	40.7	30.0	42.6	1.1
Dubai	Tons	...	–	1	12	41	79
	£'000	...	–	0.1	1.8	6.4	13.2
Hong Kong	Tons	...	93	31	18	63	–
	£'000	...	30.8	8.0	3.7	13.1	–
India	Tons	...	29	2	10	4	3
	£'000	...	6.1	0.2	2.2	0.5	0.4
Kuwait	Tons	...	1	–	1	–	10
	£'000	...	–	–	0.4	–	1.8
Malaysia	Tons	...	–	5	22	5	–
	£'000	...	–	1.3	4.7	1.2	–
Oman	Tons	...	2	5	9	7	11
	£'000	...	0.7	2.4	3.2	1.8	1.9
Singapore	Tons	...	14	2	–	17	–
	£'000	...	5.0	0.6	–	4.0	–
Other countries	Tons	...	7	5	–	–	–
	£'000	...	1.6	0.1	–	0.1	–

Source: *Foreign Trade Statistics of Iran Ministry of Commerce*
(a) 12 months starting 21st March of year shown
... Information not available
– Nil of negligible

Table 23
Cinnamon, Whole and Ground (a)
Summary of Imports into Peru

		1957-59 Average	1960-62 Average	1963	1964	1965	1966
Total	Tons	188	186	235	237	226	179
of which from:	£'000	134.2	81.7	136.2	167.9	199.3	171.3
United Kingdom	Tons	–	5	5	9	14	5
	£'000	–	1.0	1.0	1.9	4.5	1.4
Ceylon	Tons	184	176	220	221	203	167
	£'000	132.8	78.1	131.4	162.7	189.5	165.9
United States	Tons	1	2	1	2	5	2
	£'000	0.6	1.0	1.0	0.5	3.3	2.3
Other countries	Tons	3	3	9	5	4	5
	£'000	0.8	1.6	2.8	2.8	2.0	1.7

Source: *Comercio Exterior Ministerio de Hacienda y Comercio*
– Nil or negligible
(a) Quantities of ground negligible

Table 24
Cinnamon and Cinnamon-tree Flowers
Imports into Denmark

		1957-59 Average	1960-62 Average	1963	1964	1965	1966
Total	Tons	174	148	138	152	154	143
of which from:	£'000	32.2	35.9	31.6	33.9	39.2	42.4
German Federal Republic	Tons	36	6	4	5	4	5
	£'000	6.9	2.5	1.9	2.0	1.7	2.5
Ceylon	Tons	7	9	6	12	12	4
	£'000	5.6	4.7	4.4	9.7	11.9	3.5
China	Tons	6	47	69	66	107	104
	£'000	1.4	14.4	13.9	11.1	18.9	25.3
Hong Kong	Tons	50	3	–	1	–	–
	£'000	8.1	0.9	–	0.2	–	–
Indonesia	Tons	19	70	48	55	27	21
	£'000	3.6	10.8	6.8	8.8	5.7	9.0
Other countries	Tons	56	13	11	13	4	9
	£'000	6.6	2.6	4.6	2.1	1.0	2.1

Source: *Foreign Trade of Denmark Det Statistiske Departement*
– Nil or negligible

Table 25
Cinnamon (Includes Some Cassia)
Imports into France

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	Tons	122	109	107	108	93	123	98
of which from:	£'000	17.5	18.0	19.5	17.5	25.4	30.7	30.5
Ceylon	Tons	11	67	15	–	13	8	16
	£'000	3.9	2.6	5.6	–	7.0	4.6	7.4
China	Tons	36	11	–	–	36	45	31
	£'000	3.2	3.6	–	–	7.1	10.6	8.8
Indonesia	Tons	7	20	31	22	–	13	–
	£'000	0.9	3.5	4.8	4.3	–	5.7	–
Madagascar	Tons	8	–	–	16	25	27	32
	£'000	3.1	–	–	3.7	7.8	6.0	11.4
Other countries	Tons	60	11	61	70	19	30	19
	£'000	6.4	8.3	9.1	9.5	3.5	3.8	2.9

Source: *Commerce Exterieur. Direction Generale des Douanes et Droits Indirectes*
– Nil or negligible

Table 26
Cinnamon and Cinnamon-tree Flowers
Imports into Switzerland

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	Tons	...	116	109	101	115	85	107
of which from:	£'000	...	30.1	30.2	32.5	39.8	35.3	36.7
Ceylon	Tons	...	68	54	59	57	40	45
	£'000	...	21.6	20.9	25.5	28.8	24.9	22.5
China	Tons	...	3	4	19	16	17	14
	£'000	...	0.8	1.0	3.5	3.3	4.0	4.2
Indonesia	Tons	...	23	30	–	13	–	4
	£'000	...	4.4	4.9	–	3.0	–	1.5
East Africa	Tons	...	18	12	15	12	–	–
	£'000	...	2.3	1.2	1.8	1.5	–	–
Madagascar	Tons	...	–	–	–	9	16	19
	£'000	...	–	–	–	2.0	4.4	4.7
Mauritius	Tons	...	–	–	–	–	12	25
	£'000	...	–	–	–	–	1.7	3.7
Other countries	Tons	...	4	9	8	8	–	–
	£'000	...	1.0	2.2	1.7	1.2	0.3	0.1

Source: ***Statistique de la Suisse. Bureau Federal de Statistique***
– Nil or negligible
... Information not available

Table 27
Cinnamon
Imports into India

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
			(a)	(b)	(b)	(b)	(b)	(b)
Total	Tons	9	17	4	4	7	9	13
of which from:	£'000	2.6	5.3	1.1	1.8	2.9	4.3	4.5
Ceylon	Tons	–	2	1	3	3	3	–
	£'000	–	0.9	0.6	1.4	1.8	2.7	–
Malaysia	Tons	–	6	2	1	4	–	2
	£'000	–	1.0	0.4	0.2	1.1	–	0.9
Singapore	Tons	2	5	1	–	–	5	6
	£'000	0.8	1.9	0.1	0.2	-	1.5	2.2
Other countries	Tons	7	4	–	–	–	1	5
	£'000	1.8	1.5	–	–	–	0.1	1.4

Source: *Foreign Trade of India Department of Commercial Intelligence and Statistics*
(a) Average 1st January 1960 to 31st March 1963 = 39 months
(b) 12 months starting 1st April ending 31st March
– Nil or negligible

Table 28
Cinnamon
Imports into Taiwan (Formosa)

		1957-59 Average	1960-62 Average	1963	1964	1965	1966
Total	Tons	...	...	3	4	6	2
of which from:	£'000	...	...	8.5	9.1	16.6	5.0
Hong Kong	Tons	...	...	1	2	3	1
	£'000	...	...	2.1	4.0	6.7	1.1
Other countries	Tons	...	...	2	2	3	1
	£'000	...	...	6.4	5.1	9.9	3.9

Source: *The Trade of China (Taiwan). Inspectorate General of Customs*
... Information not available

Table 29
Cinnamon
Imports into Guyana

		1959	1960-62 Average	1963	1964
Total	Tons	3.3	4.5	. . .	3.1
of which from:	£'000	1.2	1.7	. . .	1.2
Grenada	Tons	2.7	3.5	. . .	2.1
	£'000	0.7	1.3	. . .	0.9
Other countries	Tons	0.6	1.0	. . .	1.0
	£'000	0.5	0.4	. . .	0.3

Source: *External Trade Customs and Excise*
. . . Information not available

Table 30
Cassia Vera and Other Cinnamon Cassia
Exports from Indonesia

		1957-59 Average	1960-62 Average
Total	Tons	6,347	8,930
of which to:	£'000	462.4	1,112.5
Belgium and Luxembourg	Tons	1,780	2,607
	£'000	131.6	327.9
Denmark	Tons	31	30
	£'000	2.2	3.4
France	Tons	–	365
	£'000	–	42.6
German Federal Republic	Tons	217	474
	£'000	24.4	60.8
Greece	Tons	24	54
	£'000	1.3	6.8
Italy	Tons	–	22
	£'000	–	2.8
Netherlands	Tons	1,704	–
	£'000	114.9	–
Norway	Tons	–	15
	£'000	–	2.0
Spain	Tons	–	14
	£'000	–	1.6
Sweden	Tons	77	164
	£'000	4.9	21.8
United Kingdom	Tons	101	332
	£'000	10.0	25.6
Czechoslovakia	Tons	–	182
	£'000	–	23.8
Hungary	Tons	–	30
	£'000	–	3.9
Poland	Tons	–	91
	£'000	–	11.2
U.S.S.R.	Tons	–	58
	£'000	–	6.6
Yugoslavia	Tons	35	59
	£'000	2.1	8.5
Malaysia	Tons	80	868
	£'000	8.4	116.1
Singapore	Tons	1,555	651
	£'000	100.8	84.1
Canada	Tons	9	101
	£'000	0.7	11.0
United States	Tons	665	2,784
	£'000	56.2	348.1
Other countries	Tons	69	29
	£'000	4.9	3.9

Source: *Trade by Commodity. Biro Pusat Statistik*
– Nil or negligible

Table 31
Cassia
Exports from Hong Kong

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	Tons	2,714	1,915	1,735	2,275	1,638	1,540	1,448
of which to:	£'000	405.9	549.2	386.6	406.3	315.6	329.4	403.9
Cyprus	Tons	6	25	13	19	19	3	2
	£'000	1.5	7.4	3.1	3.8	4.5	0.7	0.5
Aden	Tons	74	66	115	175	180	70	74
	£'000	12.8	18.6	24.1	32.3	34.9	15.3	21.7
India	Tons	742	177	57	–	–	–	–
	£'000	100.5	51.4	13.7	–	–	–	–
Iran	Tons	22	138	97	169	139	16	16
	£'000	5.6	42.2	24.5	34.2	26.7	3.1	3.9
Iraq	Tons	25	38	–	–	–	–	–
	£'000	6.3	11.8	–	–	–	–	–
Japan	Tons	282	134	38	53	27	38	54
	£'000	43.3	33.9	7.5	8.4	4.9	8.3	11.4
Kuwait	Tons	–	–	–	38	51	86	51
	£'000	–	–	–	6.8	9.3	20.0	15.3
Malaysia, Singapore	Tons	119	219	152	249	216	177	403
	£'000	21.4	64.2	33.5	38.7	40.4	37.2	100.6
Pakistan	Tons	247	643	815	1,243	439	662	325
	£'000	44.5	188.0	186.4	221.3	84.5	137.3	87.6
Saudi Arabia	Tons	2	32	40	8	22	7	3
	£'000	0.6	8.7	8.4	1.3	3.5	1.0	1.2
Trucial Islands	Tons	–	–	–	13	37	65	–
	£'000	–	–	–	3.1	7.2	13.6	-
Bahrein, Muscat, Oman, Aotar, Macau, etc.	Tons	15	95	109	27	32	8	6
	£'000	2.9	24.7	22.9	5.5	5.8	2.5	1.7
South Africa	Tons	70	61	83	81	74	18	38
	£'000	11.0	18.0	17.6	14.7	13.6	4.1	11.4
Sudan	Tons	10	22	39	70	7	–	–
	£'000	3.2	6.3	8.2	12.3	1.4	–	–
Brazil	Tons	155	34	–	–	113	66	15
	£'000	15.9	8.7	–	–	23.4	13.3	4.7
Canada	Tons	128	72	47	27	32	15	50
	£'000	21.1	18.8	9.9	4.6	5.4	2.5	15.2
Dominican Republic	Tons	13	19	34	37	48	133	98
	£'000	3.1	5.7	7.2	6.9	9.9	27.5	28.1
Morocco	Tons	–	26	30	–	–	–	–
	£'000	–	8.1	5.9	–	–	–	–
Venezuela	Tons	23	6	1	22	123	1	148
	£'000	3.6	1.8	6.2	4.2	25.6	0.3	51.9
Other countries	Tons	781	108	65	43	79	175	165
	£'000	108.6	30.9	13.5	8.2	14.6	42.7	48.7

Source: *Hong Kong Trade Statistics Department of Commerce and Industry*
– Nil or negligible

Table 32
Cassia
Exports from Malaysia and Singapore

		1957-59 Average	1960-62 Average	1963	1964	1965
Total	Tons	1,692	1,432	2,301	643	996
of which to:	£'000	268.6	246.5	289.0	111.2	204.8
Belgium	Tons	2	1	60	–	20
	£'000	0.3	0.1	6.3	–	3.9
Denmark	Tons	5	2	12	10	–
	£'000	0.6	0.2	1.2	1.6	–
France	Tons	–	32	102	–	99
	£'000	–	3.6	12.0	–	21.3
German Federal Republic	Tons	204	67	267	–	50
	£'000	28.4	9.4	28.9	–	9.9
Greece	Tons	24	12	25	2	5
	£'000	3.6	1.8	2.8	0.2	1.0
Italy	Tons	10	6	16	6	33
	£'000	0.2	1.1	1.7	1.2	6.6
Netherlands	Tons	191	28	82	–	175
	£'000	34.0	4.4	9.8	–	37.9
Sweden	Tons	31	18	69	2	11
	£'000	4.5	2.6	7.7	0.3	2.3
United Kingdom	Tons	65	23	47	7	36
	£'000	9.1	3.5	5.4	1.2	7.9
Yugoslavia	Tons	23	2	–	–	13
	£'000	3.6	0.2	–	–	3.2
Bahrein Islands	Tons	15	18	35	22	12
	£'000	2.5	5.0	6.8	4.1	2.4
Burma	Tons	7	36	7	5	12
	£'000	1.6	6.9	1.2	0.9	2.3
Hong Kong	Tons	15	10	17	1	21
	£'000	2.4	1.8	2.1	0.1	6.2
India	Tons	52	43	9	6	10
	£'000	10.7	10.8	2.1	1.2	2.2
Iran	Tons	32	14	18	43	22
	£'000	4.7	3.3	3.8	8.3	4.4
Iraq	Tons	8	9	10	7	1
	£'000	1.5	2.2	1.8	1.5	s 0.1
Israel	Tons	–	20	25	48	16
	£'000	–	3.8	4.0	8.0	3.2
Japan	Tons	92	187	230	101	86
	£'000	12.2	29.4	28.9	14.5	15.1
Mauritius	Tons	13	13	12	15	11
	£'000	1.7	2.1	1.8	2.7	2
Pakistan	Tons	4	4	2	4	1
	£'000	0.7	1.0	0.4	0.8	0.2
Thailand	Tons	30	41	34	61	39
	£'000	4.1	5.9	4.6	10.9	7.6
Kenya Tanzania	Tons	–	22	57	25	3
	£'000	–	5.9	12.7	4.9	0.7
South Africa	Tons	6	22	21	26	50
	£'000	0.8	3.2	3.2	4.7	9.8
Canada	Tons	45	49	131	10	53
	£'000	5.5	7.5	13.7	1.6	10.3
Dominican Republic	Tons	–	–	–	101	28
	£'000	–	–	–	16.6	4.9
Panama and Guatemala	Tons	10	59	2	1	1
	£'000	1.4	9.7	0.3	0.1	0.3
United States	Tons	568	252	432	3	–
	£'000	95.7	35.8	46.4	0.6	–
Venezuela	Tons	–	–	–	17	53
	£'000	–	–	–	3.3	10.9
New Zealand	Tons	5	7	6	5	7
	£'000	0.7	1.1	0.8	0.9	1.4
Other countries	Tons	235	435	573	115	128
	£'000	38.1	84.2	78.6	21.0	28.6

Source: *External Trade Statistics Department of Statistics Singapore*
– Nil or negligible

Table 33
Cassia
Exports from Vietnam

		1957-59 Average	1960-62 Average	1963	1964	1965
Total	Tons	999	675	323	544	381
of which to:	£'000	167.4	154.3	90.2	332.5	277.9
Hong Kong	Tons	20	21	–	7	2
	£'000	9.5	6.5	–	7.7	2.1
Singapore	Tons	–	10	136	12	14
	£'000	–	3.2	29.6	10.9	10.9
United Stated	Tons	979	641	187	525	365
	£'000	158.2	144.0	60.6	313.9	264.9
Other countries	Tons	–	3	–	–	–
	£'000	–	0.6	–	–	–

Source: *Statistiques Du Commerce Extérieur*
Direction Générale Des Douanes Secretariat
d'Etataux Finances, Saigon

– Nil or negligible

Table 34
Cassia Lignea Buds and Twigs
Exports from Taiwan (Formosa)

		1957-59 Average	1960-62 Average	1963	1964	1965	1966
Total	Tons	–	3	18	27	35	53
of which to:	£'000	–	0.2	1.3	1.8	2.4	4.6
Japan	Tons	–	3	17	20	35	16
	£'000	–	0.2	1.2	1.3	2.4	1.2
United States	Tons	–	–	–	–	–	32
	£'000	–	–	–	–	–	3.0
Other countries	Tons	–	–	1	7	–	5
	£'000	–	–	0.1	0.5	–	0.4

Source: *The Trade of China (Taiwan) Inspectorate General of Customs*
– Nil or negligible

Table 35
Cassia Vera Including Buds, Unground
Imports into United States

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	Tons	5,522.1	5,501.7	1,324.7	6,051.2	7,071.3	4,724.3	3,805.1
of which from	£'000	918.1	943.7	207.0	1,025.4	1,717.0	2,228.8	2,069.4
Netherlands	Tons	238.8	43.2	–	–	–	–	9.8
	£'000	33.5	7.9	–	–	–	–	3.6
Ceylon	Tons	–	–	–	–	–	12.9	–
	£'000	–	–	–	–	–	10.0	–
India	Tons	–	–	–	–	3.7	–	30.5
	£'000	–	–	–	–	1.2	–	19.9
Indonesia	Tons	4,318.1	4,659.8	1,223.4	5,547.9	6,669.4	4,488.7	2,528.9
	£'000	614.3	672.3	137.5	669.8	1,423.7	2,089.8	1,976.8
Laos, Vietnam, Cambodia	Tons	956.5	783.8	101.3	503.3	377.1	197.7	33.1
	£'000	269.0	261.0	69.5	355.6	286.2	126.7	21.2
Malaysia	Tons	–	–	–	–	21.1	–	102.1
	£'000	–	–	–	–	5.9	–	35.0
Taiwan, Formosa	Tons	–	–	–	–	–	25.0	87.8
	£'000	–	–	–	–	–	2.3	10.2
Other countries	Tons	8.7	14.9	–	–	–	–	12.9
	£'000	1.3	2.5	–	–	–	–	2.7

Source: *Bureau of the Census Report F.T.110 Department of Commerce*
– Nil or negligible

Table 36
Cassia, Cinnamon and Cinnamon-tree Flowers
Imports into Belgium and Luxembourg

		1957-59 Average	1960-62 Average	1963	1964	1965	1966 (a)	1967
Total	Tons	50	57	47	63	56	89	44
of which from:	£'000	19.4	20.1	17.8	20.4	25.1	32.2	17.4
German Federal Republic	Tons	–	–	–	–	–	–	11
	£'000	–	–	–	–	–	–	2.8
Netherlands	Tons	15	18	18	20	21	–	–
	£'000	5.4	7.7	7.9	7.5	10.1	–	–
Ceylon	Tons	10	–	17	–	13	6	9
	£'000	7.0	–	7.3	–	8.8	3.6	7.7
China	Tons		–	–	–	13	46	–
	£'000		–	–	–	2.5	10.6	–
Indonesia	Tons	3	–	–	–	3	17	8
	£'000	0.6	–	–	–	0.9	13.5	3.6
Other countries	Tons	22	39	12	43	6	20	16
	£'000	6.4	12.4	2.6	12.9	2.8	4.5	3.3

Source: *Commerce Exterior L'Institut National De Statistique*
– Nil or negligible
(a) neither crushed nor ground

Table 37
Cassia
Imports into India

		1957-59 Average	1960-62 Average (a)	1963 (b)	1964 (b)	1965 (b)	1966 (b)	1967 (b)
Total	Tons	1,237	216	49	3	15	9	23
of which from:	£'000	317.0	237.1	50.3	0.7	3.7	2.4	8.2
China	Tons	932	138	32	–	–	–	–
	£'000	239.9	153.6	37.7	–	–	–	–
Hong Kong	Tons	255	46	12	–	–	–	–
	£'000	54.9	52.5	9.7	–	–	–	–
Japan	Tons	3	–	–	–	–	–	–
	£'000	2.2	–	–	–	–	–	–
Malaysia	Tons	18	8	2	2	15	3	3
	£'000	8.9	4.4	1.4	0.5	3.7	0.8	1.4
Singapore	Tons	29	17	3	1	–	6	20
	£'000	10.5	15.6	1.5	0.2	–	1.6	6.8
Other countries	Tons	–	7	–	–	–	–	–
	£'000	0.6	11.0	–	–	–	–	–

Source: *Foreign Trade of India Department of Commercial Intelligence and Statistics*
(a) Average 1st January 1960 to 31st March 1963 = 39 months
(b) 12 months starting 1st April ending 31st March
– Nil or negligible

Table 38
Cassia and Cinnamon Bark
Imports into Japan

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	Tons	538	615	758	832	1,049	980	868
of which from:	£'000	91.1	144.2	133.1	133.4	184.8	210.3	199.1
China	Tons	347	284	369	611	849	906	725
	£'000	60.8	83.3	75.6	95.5	139.6	193.0	167.9
Hong Kong	Tons	73	30	10	–	4	–	–
	£'000	11.8	7.6	2.5	–	0.9	–	–
Indonesia	Tons	55	190	276	129	90	–	10
	£'000	8.1	31.6	36.7	20.3	17.9		2.5
Malaysia	Tons	34	32	15	–	–	–	–
	£'000	4.8	5.3	1.9	–	–	–	–
Singapore	Tons	17	10	8	–	14	–	–
	£'000	2.1	1.3	1.1	0.1	2.8	–	–
Taiwan Formosa	Tons	–	3	17	21	27	25	56
	£'000	–	0.3	1.2	1.5	2.1	2.0	6.1
North Vietnam	Tons	3	30	39	46	56	46	58
	£'000	1.2	6.4	9.5	11.9	18.0	13.5	17.4
Other countries	Tons	9	36	24	25	19	3	19
	£'000	2.3	8.4	4.6	4.1	3.5	1.8	5.2

Source: *Trade of Japan Japan Tariff Association*
– Nil or negligible

Table 39
Cassia Lignea Buds and Twigs
Imports into Taiwain (Formosa)

		1957-59 Average	1960-62 Average	1963	1964	1965	1966
Total	Tons	...	87	123	150	175	195
of which from:	£'000	...	17.7	23.3	20.9	22.9	28.2
Hong Kong	Tons	...	46	33	52	38	153
	£'000	...	10.4	6.9	8.2	6.0	22.5
Malaysia	Tons	...	–	7	2	–	–
	£'000	...	–	0.9	0.2	–	–
Singapore	Tons	...	3	–	1	–	–
	£'000	...	0.4	–	0.1	–	–
Other countries	Tons	...	38	83	95	137	42
	£'000		6.9	15.5	12.4	16.9	5.7

Source: *The Trade of China (Taiwan). Inspectorate General of Customs*
... Information not available
– Nil or negligible

Table 40
Cassia (a)
Imports into Iran

		1957-59 Average	1960-62 Average (b)	1963 (b)	1964 (b)	1965 (b)	1966 (b)
Total	Tons	...	24	13	18	24	42
of which from:	£'000	...	1.3	0.7	1.1	1.8	3.4
India	Tons	...	19	11	15	12	8
	£'000	...	0.9	0.6	0.7	0.7	0.4
Pakistan	Tons	...	4	2	3	12	33
	£'000	...	0.1	0.1	0.4	1.1	2.7
Other countries	Tons	1	–	–	–	–	1
	£'000	0.3	–	–	–	–	0.3

Source: *Foreign Trade Statistics of Iran Ministry of Commerce*
(a) Described as Cassia Lignea. Before 1962 includes other bark
(b) 12 months starting 21st March of year shown

Table 41
Cinnamon
Quarterly Average Prices and Annual Range
London Market Prices, Forward Shipment

Shillings per hundredweight

		I	II	III	IV	Annual Range	
						Low	High
0000's	1957	1,064	1,120	1,064	1,019	952	1,120
	1958	1,064	1,064	1,064	1,045	1,008	1,064
	1959	812	812	812	812	812	812
	1960	812	812	812	711	660	812
	1961	660	649	644	644	644	660
	1962	681	691	625	721	625	812
	1963	812	831	868	660	660	868
	1964	660	980	983	1,045	660	1,045
	1965	1,045	1,045	1,045	1,045	1,045	1,045
	1966	1,123	1,312	1,333	1,333	1,045	1,333
	1967	1,324	1,324	1,244	1,036	1,036	1,324
	1968	1,036	1,080	1,080			
Quillings	1957	459	459	532	560	532	588
	1958	560	560	588	512	504	616
	1959	636	636	636	636	636	636
	1960	636	636	420	420	420	636
	1961	420	420	420	434	420	434
	1962	433	419	392	434	392	434
	1963	434	496	588	588	439	588
	1964	588	563	556	569	551	588
	1965	569	569	569	569	569	569
	1966	585	616	616	700	569	700
	1967	700	700	635	504	504	700
	1968	504	640	640			

Source: *Perfumery and Essential Oils Record*

Table 42
Cassia Lignea
Quarterly Average Prices and Annual Range
London Market Prices, Forward Shipment

Shillings per hundredweight

		I	II	III	IV	Annual Range Low	Annual Range High
Whole	1957	120	133	150	182	110	210
	1958	250	240	253	253	230	270
	1959	260	260	300	352	260	375
	1960	375	392	400	400	375	400
	1961	400	400	400	400	400	400
	1962	400	400	400	400	400	400
	1963	400	367	250	250	250	400
	1964	240	188	187	185	185	250
	1965	–	–	205	205	205	205
	1966	260	300	288	293	205	300
	1967	323	333	342	375	300	375
	1968	392	407	410			
Extra Selected Broken	1957	110	123	140	168	100	200
	1958	233	220	233	240	220	260
	1959	250	250	275	325	250	350
	1960	350	358	370	370	350	370
	1961	370	370	370	370	370	370
	1962	370	370	370	370	370	370
	1963	370	323	240	240	300	370
	1964	228	180	177	179	175	240
	1965	188	188	193	195	188	195
	1966	160	242	258	277	225	285
	1967	308	312	317	350	285	350
	1968	363	390	–			

Source: *Perfumery and Essential Oils Record*
– Not quoted

Table 43
Cinnamon Bark Oil
Exports from Ceylon

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	lbs'000	2.3	1.8	1.6	1.1	1.2	1.5	1.5
of which to:	£ '000	24.2	24.5	24.0	23.0	27.4	35.4	32.8
France	lbs'000	0.2	0.3	0.2	0.5	0.3	0.2	0.3
	£ '000	1.9	3.9	3.5	9.1	7.4	4.9	6.1
Italy	lbs'000	0.2	0.3	0.3	0.1	0.2	0.3	0.2
	£ '000	2.7	3.8	4.1	2.7	4.0	5.1	6.2
Netherlands	lbs'000	0.3	0.4	0.3	0.1	–	–	0.1
	£ '000	2.8	4.8	4.2	2.5	0.1	1.2	2.6
United Kingdom	lbs'000	–	0.3	–	0.1	0.1	0.1	0.1
	£ '000	0.4	4.3	0.8	1.6	3.2	3.8	2.1
United States	lbs'000	1.5	0.2	0.5	0.2	0.3	0.5	0.3
	£ '000	15.4	3.3	8.8	4.8	7.2	10.5	6.2
Other countries	lbs'000	0.1	0.3	0.3	0.1	0.3	0.4	0.4
	£ '000	1.0	4.4	2.6	2.3	5.5	9.9	9.6

Source: *Ceylon Customs Returns Government Press*
– Nil or negligible

Table 44
Cinnamon Bark Oil
Imports into India

		1957-59 Average	1960-62 Average (a)	1963 (b)	1964 (b)
Total	lbs'000	0.5	1.5	1.7	1.2
of which from:	£ '000	0.6	0.9	0.8	1.2
France	lbs'000	0.3	0.2	0.5	0.8
	£ '000	0.4	0.3	0.3	0.8
Netherlands	lbs'000	0.1	0.6	1.1	0.3
	£ '000	–	0.2	0.5	0.4
Ceylon	lbs'000	–	–	0.1	–
	£ '000	–	–	–	0.1
Other countries	lbs'000	0.1	0.7	–	0.1
	£ '000	0.2	0.4	–	–

Source: *Foreign Trade of India*
Department of Commercial Intelligence and Statistics

(a) Average 1st January 1950 to 31st March 1963 = 39 months
(b) 12 months starting 1st April ending 31st March
. . . Information not available
– Nil or negligible

Table 45
Cinnamon Bark Oil
Quarterly Average Prices and Annual Range
London Market Prices, Forward Shipment

Shillings and decimals per lb.

		I	II	III	IV	Annual Range	
						Low	High
Ceylon	1957	192.0	192.0	192.0	192.0	192.0	192.0
	1958	192.0	192.0	192.0	192.0	192.0	192.0
	1959	192.0	192.0	192.0	192.0	192.0	192.0
	1960	192.0	192.0	192.0	192.0	192.0	192.0
	1961	192.0	192.0	192.0	192.0	192.0	192.0
	1962	192.0	176.0	168.0	168.0	168.0	192.0
	1963	168.0	168.0	168.0	168.0	168.0	168.0
	1964	184.0	472.0	472.0	472.0	168.0	472.0
	1965	556.8	580.8	601.6	603.2	472.0	603.2
	1966	603.2	648.0	648.0	648.0	603.2	648.0
	1967	648.0	648.0	683.2	700.8	648.0	700.0
	1968	700.8	612.8	440.0			

Source: *Perfumery and Essential Oils Record*

Table 46
Cinnamon Leaves, Oil
Exports from Seychelles

		1957-59 Average	1960-62 Average	1963	1964	1965	1966
Total	lbs'000	170.6	174.1	145.5	166.6	110.5	106.0
of which to:	£ '000	50.4	53.8	44.7	54.6	38.0	34.4
France	lbs'000	4.9	5.0	8.2	27.2	8.7	37.5
	£ '000	1.6	1.6	2.4	9.0	3.2	11.9
German Federal Republic	lbs'000	20.4	7.0	9.2	2.4	9.7	9.7
	£ '000	6.1	2.2	2.7	0.7	3.5	3.2
Netherlands	lbs'000	52.1	74.0	3.9	7.2	8.7	7.3
	£ '000	15.1	22.4	1.1	2.4	3.1	2.3
United Kingdom	lbs'000	43.3	49.6	82.4	77.7	57.2	15.0
	£ '000	13.9	15.1	25.1	26.0	19.3	5.3
Singapore	lbs'000	–	–	3.4	8.2	3.9	3.9
	£ '000	–	–	1.0	2.7	1.3	1.3
South Africa	lbs'000	0.2	0.5	6.8	–	0.5	1.4
	£ '000	0.1	0.2	2.4	–	0.2	0.5
United States	lbs'000	31.6	38.0	30.3	43.4	21.3	30.7
	£ '000	8.0	12.3	9.6	13.6	7.3	9.7
Australia	lbs'000	10.9	–	0.5	0.5	0.5	0.5
	£ '000	3.5	–	0.1	0.2	0.1	0.2
Other countries	lbs'000	7.2	–	0.8	–	–	–
	£ '000	2.1	–	0.3	–	–	–

Source: *Trade Report H.M. Customs and Harbours*
– Nil or negligible

Table 47
Cinnamon Leaf Oil
Exports from Ceylon

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	lbs'000	65.8	58.4	45.7	31.1	51.9	49.4	43.5
of which to:	£ '000	32.4	31.4	26.7	25.4	32.1	47.9	33.8
France	lbs'000	2.3	1.1	0.6	0.4	0.9	0.9	0.7
	£ '000	1.0	0.6	0.3	0.3	1.1	0.9	0.5
Italy	lbs'000	1.2	0.6	0.2	0.9	0.9	0.9	0.4
	£ '000	0.7	0.3	0.1	0.8	0.9	0.8	0.3
United Kingdom	lbs'000	16.7	11.7	2.2	7.6	5.0	6.4	4.9
	£ '000	7.8	6.0	1.3	6.3	5.0	4.9	3.6
Burma	lbs'000	0.4	0.4	0.4	–	–	–	–
	£ '000	0.2	0.2	0.2	–	–	–	–
India	lbs'000	7.1	2.0	3.6	0.6	1.6	2.8	5.4
	£ '000	3.5	1.9	2.1	0.5	1.6	3.1	4.2
Malaysia	lbs'000	1.2	1.5	2.0	1.1	2.8	0.3	0.4
	£ '000	0.7	1.0	1.4	1.0	3.0	0.4	0.4
Singapore	lbs'000	7.3	8.4	4.0	2.3	–	2.5	3.0
	£ '000	4.1	4.8	2.7	2.1	–	2.7	2.6
United States	lbs'000	26.1	26.7	30.9	15.7	37.1	32.8	25.5
	£ '000	12.6	13.7	17.4	12.3	37.0	32.0	19.5
Australia	lbs'000	2.1	2.4	1.7	2.0	3.1	1.0	1.2
	£ '000	1.1	1.3	1.0	1.6	3.1	1.2	1.1
Other countries	lbs'000	1.4	3.6	0.1	0.5	0.5	1.8	2.0
	£ '000	0.7	1.6	0.2	0.5	0.4	1.9	1.6

Source: *Ceylon Customs Returns Government Press*
– Nil or negligible

Table 48
Cinnamon Leaf Oil and Cinnamon Oil
Imports into United States

		1957-59 Average	1960-62 Average	1963	1964	1965	1966
Total	lbs'000	57.2	68.2	80.0	63.9	...	...
of which from:	£ '000	41.5	34.4	49.7	39.2	...	...
Netherlands	lbs'000	0.2	1.1	2.0	–		
	£ '000	0.4	0.3	2.5	–		
United Kingdom	lbs'000	2.4	0.8	–	–		
	£ '000	0.8	0.6	–	–		
Ceylon	lbs'000	26.3	30.0	29.0	20.5		
	£ '000	31.6	20.6	30.2	23.1		
Seychelles	lbs'000	28.1	32.4	49.0	42.9		
	£ '000	8.6	11.4	17.0	15.5		
Other countries	lbs'000	0.2	3.9	–	0.5		
	£ '000	0.1	1.5	–	0.7		

Source: *Bureau of the Census Report F.T.110 Department of Commerce*
– Nil or negligible
... Information not available

Table 49
Cinnamon Leaf Oil
Imports into India

		1957-59 Average	1960-62 Average (a)	1963 (b)	1964 (b)	1965 (b)	1966 (b)	1967 (b)
Total	lbs'000	12.0	8.9	5.7	4.9	7.0	12.0	13.0
of which from:	£ '000	8.3	4.7	2.9	2.8	3.8	6.5	7.3
France	lbs'000	0.9	0.3	0.3	0.6	1.5	1.9	1.4
	£ '000	0.5	0.2	0.1	0.3	0.8	0.7	0.8
Netherlands	lbs'000	1.1	1.1	1.6	2.7	3.8	5.6	4.3
	£ '000	0.5	0.4	0.7	1.2	1.5	1.6	1.7
United Kingdom	lbs'000	1.3	0.8	0.2	0.5	0.5	0.2	0.6
	£ '000	2.8	0.5	0.1	0.3	0.5	0.1	0.3
Ceylon	lbs'000	8.3	5.1	0.8	1.1	0.6	4.3	5.2
	£ '000	4.4	3.0	0.1	1.0	0.7	4.1	3.7
Seychelles	lbs'000	0.4	0.1	0.9	–	0.5	–	–
	£ '000	0.1	–	0.3	–	0.2	–	–
Other countries	lbs'000	–	1.5	1.9	–	0.1	–	1.5
	£ '000	–	0.6	1.6	–	0.1	–	0.8

Source: *Foreign Trade of India*
Department of Commercial Intelligence and Statistics

(a) Average 1st Jan. 1960 to 31st March 1963 = 39 months
(b) 12 months starting 1st April ending 31st March
– Nil or negligible

Table 50
Cinnamon Leaf Oil
Imports into Japan

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	lbs'000	0.7	1.9	1.3	1.9	6.0	9.6	2.9
of which from:	£ '000	0.9	4.0	2.9	7.2	18.5	21.8	10.3
France	lbs'000	0.5	1.5	0.9	1.9	4.9	7.2	2.4
	£ '000	0.5	2.6	2.3	6.9	9.5	11.4	4.0
Netherlands	lbs'000	–	0.2	–	–	0.4	1.5	0.1
	£ '000	–	0.9	0.2	–	1.4	2.0	0.8
United Kingdom	lbs'000	0.1	0.2	0.3	–	0.5	0.2	–
	£ '000	0.1	0.2	0.3	0.2	6.3	5.5	–
Ceylon	lbs'000	–	–	–	–	–	–	0.3
	£ '000	–	–	–	–	0.1	0.5	5.2
Other countries	lbs'000	0.1	–	0.1	–	0.2	0.7	0.1
	£ '000	0.3	0.3	0.1	0.1	1.2	2.4	0.3

Source: *Trade of Japan Japan Tariff Association*
– Nil or negligible

Table 51
Cinnamon Leaf Oil
Quarterly Average Prices and Annual Range
London Market Prices, Forward Shipment

Shillings and decimals per lb.

		I	II	III	IV	Annual Range	
						Low	High
Ceylon	1957	11.8	11.5	11.8	9.2	9.0	12.5
	1958	10.6	11.1	10.7	10.0	9.3	11.3
	1959	10.2	10.1	9.8	10.4	9.5	11.0
	1960	10.3	10.2	10.0	12.5	9.0	12.5
	1961	12.3	12.0	11.3	11.3	11.0	13.0
	1962	11.2	11.5	12.0	10.9	10.5	12.0
	1963	11.9	12.5	12.0	12.8	11.5	13.5
	1964	–	24.2	18.3	18.3	17.5	28.5
	1965	22.1	24.3	26.3	26.7	18.2	27.5
	1966	25.8	24.0	20.5	18.5	18.0	26.5
	1967	17.7	16.6	16.8	16.9	16.0	17.8
	1968	17.8	18.3	18.1			
Seychelles	1957	–	–	–	6.5	6.5	6.5
	1958	6.3	6.0	5.8	6.0	5.5	6.5
	1959	6.5	7.6	7.5	7.5	6.5	8.3
	1960	7.9	7.5	7.5	7.2	7.0	8.3
	1961	7.0	7.0	6.2	6.0	6.0	7.7
	1962	6.3	7.4	7.1	7.1	6.0	7.8
	1963	7.0	7.1	7.1	7.0	7.0	7.1
	1964	7.1	8.1	8.9	9.0	7.2	9.0
	1965	9.0	8.7	7.8	7.7	7.7	9.0
	1966	9.8	11.0	11.0	11.0	7.4	11.0
	1967	10.4	11.4	13.5	13.5	9.1	13.3
	1968	15.8	19.8	19.8			

Source: *Perfumery and Essential Oils Record*
– Not quoted

Table 52
Cassia Oil
Exports from Hong Kong

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	lbs'000	63.6	28.6	44.9	27.7	33.5	25.3	10.2
of which to:	£ '000	41.1	52.4	128.4	75.0	78.6	43.5	22.0
United Kingdom	lbs'000	13.5	1.0	–	–	–	2.2	–
	£ '000	8.5	1.0	–	–	–	2.2	–
Japan	lbs'000	17.8	5.4	7.4	4.5	1.5	6.2	3.2
	£ '000	11.5	5.6	8.9	3.6	1.3	7.6	5.2
Malaysia, Singapore	lbs'000	2.8	1.5	0.2	0.1	–	4.5	5.3
	£ '000	2.5	3.8	0.3	0.3	–	12.9	14.0
Canada	lbs'000	19.9	19.6	36.8	21.1	31.1	12.4	1.7
	£ '000	13.0	41.0	118.1	63.7	75.4	20.8	2.7
Other countries	lbs'000	9.6	1.1	0.5	2.0	0.9	–	–
	£ '000	5.6	1.0	1.1	7.4	1.9	–	0.1

Source: *Hong Kong Trade Statistics Department of Commerce and Industry*
– Nil or negligible

Table 53
Cassia Oil
Imports into Japan

		1957-59 Average	1960-62 Average	1963	1964	1965	1966	1967
Total	lbs'000	22.6	16.1	15.2	11.8	17.4	25.4	20.7
	£ '000	16.4	39.9	38.9	34.1	31.4	51.0	40.5
France	lbs'000	–	0.1	0.3	–	0.3	0.1	0.1
	£ '000	–	1.5	3.5	0.5	2.4	1.0	0.1
German Federal Republic	lbs'000	0.1	0.4	0.7	0.6	1.4	2.1	1.8
	£ '000	–	0.4	0.4	0.5	1.0	1.5	1.2
Netherlands	lbs'000	0.6	1.4	1.0	0.3	0.2	0.1	0.1
	£ '000	1.6	8.1	9.1	4.0	1.4	2.1	1.8
United Kingdom	lbs'000	0.2	1.9	3.8	4.1	12.4	11.6	8.1
	£ '000	1.0	11.0	14.2	11.1	16.2	17.6	15.8
Ceylon	lbs'000	–	0.1	–	–	0.2	0.4	0.3
	£ '000	0.1	2.5	0.1	0.2	4.3	9.7	5.7
China	lbs'000	8.5	6.3	4.4	0.4	1.2	4.9	6.9
	£ '000	6.4	8.1	3.7	1.2	3.0	8.0	7.2
Hong Kong	lbs'000	9.3	4.8	4.3	4.4	1.5	5.2	2.8
	£ '000	6.5	4.2	4.1	4.4	1.5	7.3	4.4
United States	lbs'000	–	0.3	0.7	2.0	0.2	0.5	0.6
	£ '000	–	3.4	3.8	12.2	1.6	2.7	4.3
Other countries	lbs'000	3.9	0.8	–	–	–	0.5	–
	£ '000	0.8	0.7	–	–	–	1.1	–

Source: *Trade of Japan Japan Tariff Association*
– Nil or negligible

Table 54
Cassia Oil
Quarterly Average Prices and Annual Range
London Market Prices, Forward Shipment

Shillings and decimals per lb.

	I	II	III	IV	Annual Range	
					Low	High
1957	13.5	13.5	13.5	13.3	13.3	13.5
1958	13.6	14.0	13.8	13.8	13.3	14.0
1959	13.8	13.5	14.0	14.2	13.0	14.5
1960	15.3	–	–	–	15.3	15.3
1961	–	37.3	56.7	46.7	32.0	60.0
1962	53.3	60.5	80.0	75.2	50.0	80.0
1963	65.5	64.1	63.3	65.0	60.0	68.0
1964	65.0	65.0	65.0	59.0	59.0	65.0
1965	57.8	52.5	51.3	51.0	50.0	52.0
1966	48.0	42.3	31.3	40.0	31.0	47.0
1967	37.3	31.3	26.2	17.3	19.0	40.0
1968	19.3	19.3	19.1			

Source: *Perfumery and Essential Oils Record*
– Not quoted